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A STUDY OF THE COMPREHENSION PROCESS IN READING

by

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled A Study of the Comprehension Process in Reading submitted by Carol Theone Olson in partial fulfilment of the requirements for the degree of Master of Education.

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DEDICATION

In Memory of My Father

REV. HOWIE O. OLSON

1914-1979

My First and Best Teacher

With Love

ABSTRACT

This study examined the comprehension strategies used by 10 Grade 4 proficient readers to read a story within an instructional environment. Instructional guidelines were based on the nature of the comprehension process. These guidelines, in turn, formed the basis for the instructional plan which was implemented by the researcher. Within the plan, each subject silently read a story and paused at selected intervals to express what he was thinking about. This procedure was followed by the subject's retelling of the story and his responses to probing questions.

Categories of comprehension strategies were identified a priori and subjects' responses were analysed according to them. Findings indicated that these proficient readers used background knowledge, purpose for reading and story information to construct meaning, i.e., to predict and infer. Thus, various meanings were expressed by different subjects after reading the same information. Among the subjects, two patterns of response types were identified. Because of the reader's active role in constructing meaning, it was suggested that teachers adopt a responding role more frequently in classroom interaction.

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C.O.

TABLE OF CONTENTS

CHAPTER PAGE

I. A STUDY OF THE COMPREHENSION PROCESS IN READING 1
  PURPOSE 2
  RESEARCH QUESTIONS 2
  SIGNIFICANCE 3
  LIMITATIONS 4
  DEFINITIONS 4
  PLAN OF THE STUDY 6

II. THEORY, RESEARCH AND TECHNIQUES 8
  OUTLINE OF THE THEORETICAL FRAMEWORK 9
    "Reading Begins Before the Book is Open" 10
      Encountering the World 10
      Relating an Experience to What One Knows Already 11
      Implication for Instruction (1) 14
      Purpose(s) for Reading 14
      Implication for Instruction (2) 17
    "Reading [requires] . . . . an interactive relationship between the reader and an author". . . 18
      Predicting 18
      Sampling Surface Structure/Confirming or Revising Predictions 19
      Implication for Instruction (3) 22
    "Reading/thinking continues after the book is closed" 24
      Implication for Instruction (4) 25
    A Summary View of the Reading Process 25

CHAPTER PAGE

Implication for Instruction (5) 26

OBSERVING COMPREHENSION STRATEGIES 31

REVIEW OF CHAPTER II AND OVERVIEW OF CHAPTER III . . 33

III. THE INSTRUCTIONAL PLAN AND INSTRUCTIONAL OUTCOMES . . . 34

THE INSTRUCTIONAL PLAN 34

Selection of Subjects 34

Development of the Instructional Plan 35

The Instructional Plan Outline 37

INSTRUCTIONAL OUTCOMES 39

Encountering the World 39

Purpose for Reading 41

Developing Background Knowledge 44

Predicting/Sampling Surface Structure/ Confirming or Revising Predictions 52

The Pilot Study 53

Procedure for Data Gathering 56

Feedback 59

REVIEW OF CHAPTER III AND OVERVIEW OF CHAPTER IV . . 68

IV. FINDINGS OF RESEARCH: COMPREHENSION STRATEGIES 69

ANALYSIS OF PROTOCOL RESPONSES 70

Categories of Comprehension Strategies Used in Protocol Analysis 70

Definition of Categories 71

Reliability of Response Categorization 74

TABULATION OF RESPONSES 75

CHARACTERISTICS OF GROUP 1 and GROUP 2 79

CHAPTER PAGE

Use of Categories A and D 79

Use of Category E 81

Comparison of Response Patterns of One Typical Member from Each Group 82

SUMMARY OF FINDINGS OF PROTOCOL ANALYSIS 86

ANALYSIS OF UNAIDED RECALLS 87

ANALYSIS OF RESPONSES TO PROBING QUESTIONS 87

Responses to Character Analysis Question 87

Responses to Plot Questions 90

Responses to Theme Question 93

SUMMARY OF FINDINGS OF UNAIDED RECALLS AND PROBING QUESTIONS 95

RELATIONSHIP OF FINDINGS TO RESEARCH QUESTION 1 . . . 96

RELATIONSHIP OF FINDINGS TO RESEARCH QUESTION 2 . . . 98

REVIEW OF CHAPTER IV AND OVERVIEW OF CHAPTER V . . . 99

V. IMPLICATIONS FOR THEORY, INSTRUCTION AND RESEARCH . . . 100

IMPLICATIONS FOR THE THEORETICAL FRAMEWORK 100

IMPLICATIONS FOR INSTRUCTION 104

Critique of a Questioning Procedure 104

Alternative Procedures for Receiving Feedback . . . 105

IMPLICATIONS FOR THE INSTRUCTIONAL ENVIRONMENT . . . 106

IMPLICATIONS FOR FURTHER RESEARCH 114

Longitudinal Ethnographic Research 114

Implications for Related Research 116

CONCLUDING STATEMENT 116

BIBLIOGRAPHY 117

PAGE
APPENDIX A 123
APPENDIX B 125
APPENDIX C 133
APPENDIX D 147
APPENDIX E 149
APPENDIX F 152
APPENDIX G 154

LIST OF TABLES

TABLE PAGE

1. Questions of Interest to the Children 43
2. Number of Responses Given by Each Child in Protocol Analysis 76
3. Approximate Percentage Use of Response Categories by Each Child in Protocol Analysis 77
4. Response Categorization for Each Child to Plot Question 91
5. Response Categorization for Each Child to Theme Question 94
6. A Teacher-Directed Reading Experience 107
7. A Child-Centered Reading Experience 111

LIST OF FIGURES

FIGURE PAGE

1. Reading Comprehension 27,101
2. Response Trends of Group 1 Compared to Group 2 80
3. Reading Comprehension (Revised) 103

CHAPTER I

A STUDY OF THE COMPREHENSION PROCESS IN READING

Recent research in reading and language education has shifted emphasis from comprehension skills, or various kinds of cognitive outcomes of reading, to comprehension strategies, or various cognitive processes that readers use to achieve those outcomes. One theme recurs in the research: the reader is the active agent in the comprehension process.

> Reading is an _active_ process in which readers use the strategies of sampling, predicting, confirming or rejecting, and integrating information in order to derive meaning from the graphic, syntactic and semantic cues provided by the author. (Goodman in Goodman and Watson, 1977, p. 869)

Many classroom procedures designed to teach children to read retain a skills focus at least partly because skills can be sequenced, practised and tested. Findings of recent research indicate, however, that the comprehension process cannot be similarly packaged because it is not directly observable or manipulable. Yet, findings of research concerning the comprehension process are useful in helping to shape the teacher's role as a facilitator of the reader's use and development of his comprehension strategies. This focus develops as the theory and research concerning the comprehension process are examined and practical implications for teachers are considered.

PURPOSE

The purpose of this investigation was to study the comprehension process of proficient readers within an instructional environment which was designed to be conducive to that process, as it was based on implications for instruction contained in the process.

This purpose was accomplished by: (1) creating a theoretical framework based on literature from reading and language education regarding the nature of the comprehension process; (2) identifying implications for instruction based on the theoretical framework; (3) applying these implications by developing an instructional environment with grade four subjects; (4) studying the comprehension process within this instructional environment by adapting and applying techniques for "observing" the comprehension process; and (5) analysing and discussing the findings and their implications for instruction.

RESEARCH QUESTIONS

1. What comprehension strategies do fourth grade proficient readers in this study use when reading a story which they encounter within an instructional environment designed to be conducive to the comprehension process?

2. In what ways does the instructional environment influence the comprehension strategies used by the subjects in this study?

SIGNIFICANCE

During this decade, much insight has been gained regarding the nature of the comprehension process. Recent theory and research indicate that individuals employ strategies when reading similar to those they use to comprehend daily events and oral language. Yet this information has had little effect on instructional methods or materials used in classrooms. Therefore, studying the nature of the comprehension process and deriving implications for instruction which are useful for teachers in a classroom setting is important.

Second, little recent research has studied the comprehension process within a clearly defined instructional environment. Usually, the experimental situation is isolated from the subjects' other experiences in a laboratory-type setting. Given the nature of the comprehension process, it is important to examine it within the framework of an instructional environment in which the teacher provides for experiences which the child may use to help him comprehend when reading.

Finally, much of the study of comprehension strategies has focused on the methods readers use to identify words in a passage context. For example, miscue analysis (Goodman and Burke, 1972) which focuses on comprehension, is still largely word-centered. Little work has been done to examine strategies readers use to comprehend larger elements of discourse in a passage. However, this focus is important given what is known about the comprehension process and the possibility of finding new information.

LIMITATIONS

The following limitations of this study must be recognized:

1. Findings of this study depended on the verbalization ability of the students. Some students may have been more articulate than others. The students' choices of what to say or omit may have affected the outcome of the study.

2. The small sample size limited the generalization of findings to larger populations.

3. The instructional environment was evaluated at the same time as it was evolving. For example, the relationships between teacher/researcher and children were developing on a daily basis. Expectations were also clarified as the study progressed.

DEFINITIONS

For the purpose of this study, the following definitions will be employed.

Comprehension - a complex process whereby a reader makes sense of written language; a part of the daily process of making sense of information received from the environment.

Fry's Graph for Estimating Readability (1967) - a graph used to determine the grade level of written material. The readability level advances as words and sentences increase in length.

Instructional environment - a context for teaching in which the teacher's role is to facilitate the student's use and development of comprehension strategies.

Predicting - an anticipatory process whereby a reader eliminates unlikely alternatives based on what he knows already and his purpose(s) for reading.

Proficient readers - ten children in grade four (May 1978) who achieved above the 75th percentile on the comprehension subtest of the Edmonton Public School Board Standardized Reading Achievement Test administered to them in May, 1977.

Protocol analysis - a procedure for "observing" the comprehension process. The reader stops reading silently at selected junctures in the story and verbally explains what he is thinking about at that point.

Purpose - a personal reason for reading, for example, information, aesthetic experience, etc.

Sampling surface structures - a process whereby the reader makes the most economical use possible of print marks on the page by using other available cues such as linguistic and experiential background.

Strategies - the reader's methods for using information available to him prior to, during and following the reading task.

Unaided recall - a procedure for "observing" the comprehension process. Following the silent reading of a story, the reader orally reconstructs the story in his own words. The teacher/researcher may ask open-ended questions based on information which the reader has already supplied.

PLAN OF THE STUDY

The theme of this study is that the reader is the active agent in the reading process. The study encompasses theory and practise which focus on this theme.

Chapter II presents theory and research concerning the nature and development of the comprehension process in reading. The theoretical framework describes essential elements of the process and their relationships to each other. Instructional implications are derived from this information. Research techniques for the observation of the comprehension process are described and adapted for the purpose of this study.

Chapter III examines the development of an instructional plan and environment within which the comprehension process to be studied occurs. The central question of the plan is "What would life be like for me if I were a pioneer child in Alberta?" The implementation of the plan with 10 Grade 4 proficient readers is discussed in relation to process and content objectives.

Chapter IV deals with the focus of the study, comprehension strategies used by the subjects of the study. In order to investigate the two research questions, categories of comprehension strategies are developed through an analysis of each reader's responses in protocol analysis and unaided recall.

Chapter V reviews the findings and their relationship to the comprehension process, the implications for instruction, and the use of the instructional plan. The effectiveness of this type of instructional study for examining the comprehension process is evaluated and recommendations for further research are discussed.

CHAPTER II

THEORY, RESEARCH AND TECHNIQUES

In 1908, Huey realized the immense task facing researchers who attempted to define the process of comprehension.

> To completely analyse what we do when we read would indeed be the acme of a psychologist's achievements, for it would describe very many of the most intricate workings of the human mind as well as unravel the tangled story of the most remarkable specific performance that civilization has learned in all its history. (p. 6)

Comprehension of reading material has always been a major concern of reading educators, a high priority goal for reading instruction, and the subject of theoretical speculation and educational research. However, only with the dissemination of findings from psycholinguistic research—the study of the relationship between thought and language—was greater insight provided into the actual process of comprehending and a more valid factual base established from which to draw implications for reading instruction. The following definition of comprehension indicates the contribution from psychology:

> Comprehension means relating new experiences to the already known. (Smith, 1975, p. 10)

The contribution of a linguistic perspective is evident in the following definition:

> Reading is a complex process by which a reader reconstructs, to some degree, a message encoded by a writer in graphic language. (Goodman, 1970, p. 5)

The essential concept underlying this study is that meaning is the foundation, the process, and the goal of reading.

First, the review of the literature deals with theory and research concerning the nature of the comprehension process in reading, concept development and language learning. An outline provides the structure for discussion of essential factors in the process and indicates the sequential process of reading comprehension. Implications for instruction related to each factor in the process are discussed in conjunction with a review of current methodologies. The first part ends with a summary view of the comprehension process.

Second, the review of the literature examines research techniques for observing readers' comprehension strategies. The two procedures used in this study are discussed: protocol analysis (Olshavsky, 1975) and unaided recall (Goodman and Burke, 1972).

OUTLINE OF THE THEORETICAL FRAMEWORK

I. "Reading begins before the book is open" (Goodman and Watson, 1977, p. 869).
    A. Encountering the world
    B. Relating an experience to what one knows already
    C. Implication for instruction (1)
    D. Purpose for reading
    E. Implication for instruction (2)

II. "Reading [requires] . . . an interactive relationship between the reader and an author" (Goodman and Watson, 1977, p. 869).
    A. Predicting
    B. Sampling surface structure (i.e., graphics)/Confirming or revising predictions
    C. Implication for instruction (3)

III. "Reading/thinking continues after the book is closed"
(Goodman and Watson, 1977, p. 869).
   A. Implication for instruction (4)
IV. A summary view of the comprehension process.
   A. Implication for instruction (5)

"Reading Begins Before the Book is Open"

> Reading is not a matter of going from words to meaning but rather from meaning to words. (Smith, 1971, p. 35)

Comprehension in reading operates within the individual's constant endeavor to make sense of daily experiences. The reader's understanding of the world which he has stored in his mind and his purposes for reading determine what he will glean from the print.

Encountering the World

> The individual is motivated by a generalized need to explore his environment, to come to terms with it by gaining competence to cope with it. (Smith, Goodman, and Meredith, 1976, p. 71)

Daily, individuals encounter the world. Some encounters are so familiar that one's actions are usually predictable, for example, morning routines of washing, dressing and eating breakfast. Of course, at some early point, these routines were not predictable but became so through regularly engaging in them. In fact, becoming routines is what made them predictable. Even with routines, however, there are instances that cause momentary uncertainty, and the need to make sense of, or comprehend, some unexpected encounter. For example, the water main line has burst, a favorite shirt is soiled or the milk pitcher is empty.

There are many encounters in the life of a child that are more startling than any of these because the child's experience with the world is limited and he encounters many things for the first time, for example, a new baby in the family, a new child in the classroom, a snow fall. In short, the thrust of a child's daily activities is to make sense of the world in order to make it predictable.

In the context of reading comprehension, an encounter with the world is a situation or a question for which a person lacks the information to act appropriately. Reading is one way to "reduce uncertainty" (Smith, 1975) when a person is confronted by an actual or hypothetical problem that is of interest or concern to him. The encounter with the world continues as a person reads because he is constantly faced with reducing uncertainty, that is, comprehending. Thus, reading is a problem-solving process as the reader actively employs strategies in order to comprehend the author's message (Olshavsky, 1975; Goodman, 1975; Stauffer, 1969).

Relating an Experience to What One Knows Already

> There is a private theory in the head of all of us, a theory of what the world is like and how it is organized. This theory, which I have called cognitive structure, [emphasis added] is every individual's attempt to summarize what he knows about the world. Without such a theory our past would be incoherent, our present incomprehensible and our future a barrage of surprises. (Smith, 1975, p. 243)

Each individual develops a system of categories in order to make sense of the objects and events he perceives. Experience is the base for the development of categories, but an individual decides whether to treat one object or event differently from another. Thus, categories exist only in the minds of individuals. For example, a young child may point to an object generally referred to as a cat and say "Dog." This statement indicates that the child has internalized many of the characteristics of "Dog" (four legs, tail, whiskers) but has no system for separating dogs from cats. In order to separate dogs from cats, the child must identify features peculiar to dogs (dogs bark, dogs bury bones). This "distinctive features" list (Katz and Fodor, 1963) insures inclusion of the object in one category but exclusion from others.

Making sense requires not only the relegating of objects and events into categories based on distinctive features but also the relating of categories in meaningful ways for a "world representation" to develop (Britton, 1970, p. 15). In the experience of a child, many relationships for "Dog" can develop because meanings are interrelated through experiences. For example, "My dog is my friend"; "If you are lost, a policeman's dog will find you."

Only relevant information is selected from existing cognitive structure in attempting to make sense of, or comprehend, a particular situation.

> We use what we know about the world in order to make sense of it, not blindly, but by seeking information that will answer specific questions. The true art of making sense of the world lies in knowing what can be safely ignored [in any given encounter]. (Smith, 1975, p. 35)

For example, the uncertainty with which a child meets a strange dog could indicate conflicting past experiences with dogs. The child may need to be reassured that this new dog is friendly before he realizes that 'not friendly' encounters of his past do not apply in this particular situation.

A study by Anderson, Reynolds, Schollert, and Goetz (1977) illustrates the effect of cognitive structure on the interpretation of ambiguous reading material. Thirty physical education students and thirty music education students read a passage that could be given either a prison break or a wrestling interpretation and another passage that could be interpreted as playing cards or playing woodwind instruments. The results showed that the subjects' personal histories and knowledge influenced the interpretation of the passages. Writers strive for clarity, not ambiguity, because communication is the process and the goal of writing and reading. However, this study does indicate that readers impose meaning on a passage in relation to cognitive structure.

Piaget (1959), in explaining the nature of the learning process in children, stresses the relationship between the action of the child on the environment (assimilation) and the action of the environment on the child (accommodation). The child himself must incorporate the new information into his existing cognitive structure or adjust his cognitive structure to fit the new information from the environment. These two processes compensate for each other in a tendency towards transitory equilibrium although the continuation of the processes yields disequilibrium. Therefore, the child continuously and actively structures his own learning as he interacts with the environment.

Implication for Instruction (1)

> Because a reader can only comprehend in relation to his cognitive structure, appropriate background knowledge should be reasonably assured or available for most reading situations.

The question, "What do you know about ________?" opens up a view of the child's comprehension of a particular topic. Teachers use audiovisual and fieldtrip experiences, explanations and stories, to provide a common experience base for exploring a topic. And they build from experiences of individuals. Regardless of how a teacher might try to assure this, it must be remembered that what a person knows already is a major factor in comprehending a written passage.

Purpose(s) for Reading

> What is common to every use of language is that it is meaningful, contextualized and in the broadest sense social. (Halliday, 1969, p. 26)

No one engages in using language without a purpose for it; language makes sense only when one knows its purpose; and one learns language only by using it purposefully (Halliday, 1969; Britton, 1970). Reading is one use of language that, in these respects is no different from the use of oral language.

Children growing up in a literate society are generally aware that the purposes of written language are related to oral language. The 5 or 6 year old child is not always able to articulate this awareness by responding appropriately to terms such as 'word,' 'letter,' and 'number' (Clay, 1975; Downing and Oliver, 1974).

However, the child "knows what language is because he knows what language does" (Halliday, 1975, p. 244). Halliday identified seven general functions of language from observational studies of oral language which he states are acquired and mastered by the child before he begins school. Goodman and Goodman (1976) have identified instances of these functions in written language commonly experienced by young children in a literate society.

Halliday's Functions of (Oral) Language		Goodmans' Examples in Written Language
Instrumental	I want	advertisements on TV, in magazines
Regulatory	Do as I tell you	STOP signs, PARKING signs
Interactional	Me and you	letters from grandparents
Personal	Here I come	"my" written name
Heuristic	Tell me why	instructions for making something
Imaginative	Let's pretend	story-telling, read-along books and records
Informative	I've got something to tell you	signs in grocery and department stores

Function or purpose is essential for developing ability in language use. Halliday (1969) states that language learning is not independent of meaning or function. Furthermore, function preceeds form in language development and always remains primary.

> Learners build from whole to part and build a sense of form and structure within their functional, meaningful experiences with language. (Goodman, 1976, p. 13)

For example, Clay (1972) studied the print awareness of 5 year old children who exhibited reading-like behavior but were not following the print. The children used phrase and sentence structures such as "Once upon a time . . ." and "Mother said, 'Do you want a piece of cake?'" These children had learned that "Books talk in a special way" through their contact with written language in personally meaningful situations (p. 5).

Observational studies with many children have led Goodman and Goodman to conclude that

> . . . children learn to read and write in the same way and for the same reason they learn to speak and listen. The way is to discover language in use as a vehicle of communicating meaning. The reason is need. Language learning whether oral or written is motivated by the need to communicate, to understand and be understood. (1976, p. 2)

Torrey (1969) cites the case study of 5 year old John who taught himself to read with the help of labels and television. "John treated written language as a natural alternate version of spoken language . . . [In other words] . . . John expected to find in print the things he would normally say" (p. 555). For example, his oral reading retained normal sentence intonation. However, he refused to read long passages orally because the tutor was able to read (pp. 553-554). That is, he felt it was not purposeful to read to her.

Doake (1978) found that self-taught readers in his study had enjoyed many purposeful experiences with books. He hypothesized that continual experience with books and print is necessary for the child to independently begin to read.

Implication for Instruction (2)

> Because comprehension is a personal search for meaning, the reader must be aware of the purpose for reading and must perceive the purpose as his own.

Often a child is unaware of the purpose for reading since only the questions asked after a reading assignment reveal what he should have been reading for. For example, Nelson's Language Development in Reading Series (1978), authorized for use in Alberta, often employs such a questioning strategy. Wardhaugh (1971) describes learning to read as a formal and deliberate acquisition of knowledge about language through analytic and synthetic techniques with emphasis on visual discrimination.

> Evidently, many children do not understand what reading is or what they are supposed to be doing, or what the terms mean that are being used in the instructional process. (p. 6-179)

Wardhaugh's description of reading instruction is not indicative of the process that naturally occurs when children learn to read on their own, that is, when children are seeking meaning from written language.

Goodman and Goodman (1976) suggest that Halliday's function of language (1969) provides a foundation for meaningful encounters with written language. In this context, reading to learn is the vehicle for learning to read. Children learn to read as they read content materials from science, math, social studies, the arts. They read for a purpose. Perhaps this purpose is to gain information or to find out how a story ends. Learning about reading, on the other hand, is a task which is isolated from language use because it is outside the framework of the purposeful (and therefore, meaningful) endeavors of the child.

"Reading [requires] . . . an interactive relationship between the reader and an author"

> Language carries the message from the writer but it must be re-created by the reader out of raw materials within himself. (Smith et al., 1976, p. 259)

Cue systems that lie within the reader—background experiences, concept development and purpose—are supplemented by cue systems within words and within the flow of language with which the reader is familiar. The reader must effectively use cues in order to communicate with the unseen author.

Predicting

> Prediction . . . does not mean wild guessing, nor does it mean staking everything on a single outcome. Rather, prediction means the elimination from contention of those possiblities that are highly unlikely, and the examination first of those possibilities that are most likely. (Smith, 1975, p. 308)

There are two conditions which enable the reader to make sensible predictions (Smith, 1975).

1. The passage to be read must be related to what the reader already knows.

2. The reader must make use of what he already knows.

"The art of fluent reading lies in the skilled reduction of the amount of visual information the brain has to process" (Smith, 1975, p. 308). In a study by Smith and Holmes (1971), thirty random letters were flashed on a screen for 1/10 second. Experienced readers were able to recall only five or six letters. When the thirty letters comprised a meaningful sentence or phrase and were flashed, most of the readers identified the entire phrase or sentence. Rather than attempting to identify the distinctive features of all the letters in the sentence, the readers relied on the redundant features of language to help them eliminate unlikely possibilities. For example, some combinations of letters are common in written language (st, ai); some combinations never occur (sr, yz). Some language patterns are common (to the house); some never occur (boy the went).

> Instead of trying to slog through thickets of meaningless letters and words in the fond hope that eventually some nugget of comprehension will arise, the reader is looking for meaning all the time. (Smith, 1975, p. 311)

Meaningful predictions are made on the basis of what the reader has read and the knowledge he brings to the reading situation regarding the nature of language and the world. The reader checks his predictions in order to confirm or revise them by sampling surface structures.

Sampling Surface Structure/Confirming or Revising Predictions

> Reading is a selective process. It involves partial use of available minimal language cues selected from perceptual input on the basis of the reader's expectation. As this partial information is processed, tentative decisions are made to be confirmed, rejected or refined as reading progresses. (Goodman, 1970, p. 260)

Olshavsky (1975) outlined Goodman's model (1970) for interaction with the print developed through studies of oral reading.

1. The reader scans the print from left to right.
2. The reader fixes at a point.
3. The reader uses the selection process and picks up

> graphic cues (constraints of prior choices, language knowledge, cognitive styles and learned strategies).
>
> 4. The reader forms a perceptual image—what he sees and expects.
> 5. The reader searches his memory for related syntactic, semantic and phonological cues.
> 6. The reader makes a guess consistent with graphic cues, semantic analysis leads to partial decoding, and meaning is stored in short term memory.
> 7. If no guess is possible, the reader checks recalled perceptual information and tries again.
> 8. If he can make a decodable choice he tests it for semantic and grammatical acceptability in context.
> 9. If the choice is not acceptable, he regresses to the point of inconsistency.
> 10. If the choice is acceptable, decoding is extended, meaning is assimilated with prior meaning and prior meaning is accommodated, if necessary.
> 11. The cycle continues. (p. 30)

The process is much faster than the sequence seems to indicate.

Goodman (1970) states:

> In silent reading, the reader sweeps ahead sampling from the graphic input, predicting structures, leaping to quick conclusions about the meaning and only slowing down or regressing when subsequent sampling fails to confirm what he expects to find. (p. 19)

Smith (1973) disagrees that proficient reading necessarily occurs from left to right. He cites the example of speed readers who read down the center of a page. In short, the efficient reader takes the most expedient route to meaning.

Using oral language as a "window" on the silent reading process, Goodman developed the theory that oral reading "miscues" indicate the cue system the reader is using to make sense of the print. There are three cue systems according to Goodman (1970, p. 15).

1. Grapho-phonic information consists of letters, spelling patterns, and phrase or sentence patterns created by conventions of spacing words and punctuation. It includes sounds and sound patterns and the relationship between these and graphic representations. An example of a grapho-phonic miscue is The smell boy pretended he was a cowboy (Expected response: The small boy pretended he was a cowboy).

2. Syntactic information consists of the sentence patterns and pattern markers such as function words (the, but, in, etc.), inflections (-ing, -ed, -s, etc.), and punctuation. An example of a syntactic miscue is The small boy plays he was a cowboy (Expected response: The small boy played he was a cowboy).

3. Semantic information includes the reader's experiences and concepts that he brings to a reading situation, and the way he relates the information to relevant experiences. An example of a semantic miscue is Go down the stairs (Expected response: Go sweep the stairs).

Oral reading miscues have provided much information on the reading process. A basic distinction between good and poor readers has been clarified. Goodman (1976) found that the reader who strives for word-perfect reading (grapho-phonic accuracy) generally comprehends less of what he reads than the reader who strives to make sense of the passage (semantic accuracy).

Implication for Instruction (3)

> Because reading is a meaning-getting process—a "psycholinguistic guessing game" (Goodman, 1967)—the reader should be encouraged to take risks, i.e., predict when he reads. He should be given much time to read in school so that he can develop strategies for comprehending what he reads.

According to Biemiller (1975), the average hour of reading instruction comprises only four minutes of actual reading. Skill building activities such as decoding exercises and word identification drills take most of the time. Yet such activities provide few clues for predicting and sampling text. Certainly, much meaning is missing as are other language cues. Reading a story is often done orally outside the framework of a functional language context because all the children have the same books and are reading along. The passage may be read because it happens to be in the next lesson. Smith (1975, p. 310) refers to the typical reckless guesser—the child who is trying to produce the correct word for the teacher regardless of how little sense it makes.

Goodman and Watson (1977) described a broad instructional plan which features methods developed by others which facilitate the reading process. All the activities require the child to actively search for meaning. Seven examples follow. (1) Uninterrupted sustained silent reading, usually referred to as USSR (McCracken, 1971) and (2) rereading allow children to use strategies which cannot be taught directly (using background experiences, sampling text, etc.). (3) Reading aloud to children helps them become familiar with the sound of written language. (4) Using closure forces readers to seek meaning within the constraints imposed by the author. (5) Readers must reconstruct the author's message in order to retell a story or part thereof. This review can provide a base for predicting what will happen next. (6) Stauffer's directed reading-thinking activity—DRTA (1969)—focuses on the predicting part of the reading process. Readers are asked questions such as "What do you think? Why do you think so? Can you prove it?" at intervals in a story being read by all. Picture and title clues as well as clues in the print and personal clues from background experiences are shared. As readers become familiar with the procedure, they stop reading at suitable intervals and express their predictions to other readers without the aid of questions. Again, readers are forced to seek meaning, i.e., comprehend. (7) The language experience approach (Allen and Allen, 1966) allows readers to use language and experiential background. Much of the material for reading is self-chosen in an attempt to ensure appropriate background and function.

Strategy lessons have been developed by Goodman and Burke (1972) and Watson (1976) for use within the above instructional plan. These lessons are based on findings of miscue analysis for an individual reader. They focus on relationships of words in sentences and across sentences that a reader is not attending to. For example, the word-perfect reader is encouraged to skip over words he cannot figure out or insert a marker for later study if he understands the gist of the message.

These activities help readers to recognize that only comprehension counts when reading. In oral language, there are more words in the speech stream than what one listens to and one still comprehends the message. In reading, efficiency is multiplied when thought units rather than word units are processed. Every reading strategy is ultimately a comprehension strategy. Making sense is the name of the game. As Goodman (1977) states, "'Reading comprehension' is a redundant term."

"Reading/thinking continues after the book is closed"

> We each build our own representation of the world, but we greatly affect each other's representation, so that much of what we build is built in common. (Britton, 1970, p. 19)

Proficient readers go beyond the ideas held prior to reading by integrating the information from reading into existing cognitive structure (Goodman and Watson, 1977). Feedback occurs not only as a person meditates with himself, during or after reading, but as he talks with parents or friends about what he has read or as he makes use of the information in a meaningful way (Moffett and Wagner, 1976). For example, reading instructions imply making or building something; reading descriptive accounts of life in other times, adventures and tales inspire re-enactments. What the reader makes of the reading experience (i.e., what he comprehends) depends, to a great extent, on any use he makes of the meaning which may provide him with feedback on his comprehension.

Implication for Instruction (4)

> Because reading is a purposeful language activity, the reader should be given the opportunity when appropriate, to use the information in a way that he perceives as valid, thereby receiving feedback on the effectiveness of his comprehension.

This implication does not mean that a child should be required to write a book report or plan a project based on every book he reads. Rather, since reading occurs within a meaningful situation and language context, using and sharing the information is often appropriate and natural.

Teachers have long used discussion and various kinds of projects as a means of evaluating and extending student learning. The activity is purposeful to the child. One way to accomplish this is to give children some opportunity to determine if and how a reading activity could be extended. For example, children could be involved in deciding upon group of individual activities, the nature of the activity, etc. The reactions of others to their efforts would provide the children with information concerning the effectiveness of comprehension. The information becomes more personalized if used for individual or group effort.

A Summary View of the Reading Process

In the same purposeful way that the reader seeks meaning in daily encounters with the world, he attempts to make sense of what he reads. To be meaningful, the reading material must be related to the reader's background experiences (actual and vicarious) since the reader can comprehend only in relation to what he knows already. To be purposeful, a reading experience must arise from the interests and needs of the reader and serve as a means to ends which he perceives as valuable. For example, the reader reads to answer a question, arrive at a decision, etc. Because the reading experience is based on the reader's interests and background experiences, and since the language he reads is whole, natural discourse, what he reads is usually highly predictable, an important aspect of the reading process. Within this meaningful, purposeful and (therefore) predictable context, the reader samples just enough print information to confirm or revise his predictions. During and after reading, he meditates with himself, providing his own feedback to the comprehension process. After reading, he often receives formal or informal feedback from others. The feedback helps him to evaluate the effectiveness of his comprehension and may lead to re-reading, further reading, or some personal artistic or linguistic expression.

The reader is at the center of the reading process. Reading can occur only as he actively relates all of the elements of the process in order to comprehend. Figure 1 diagrams the relationship of essential elements in the reading process.

Implication for Instruction (5)

Because the reader is the active agent in the comprehension process, the teacher's role is to provide an appropriate environment for the reader to engage in the entire process so that the reader can develop and enhance his comprehension strategies.

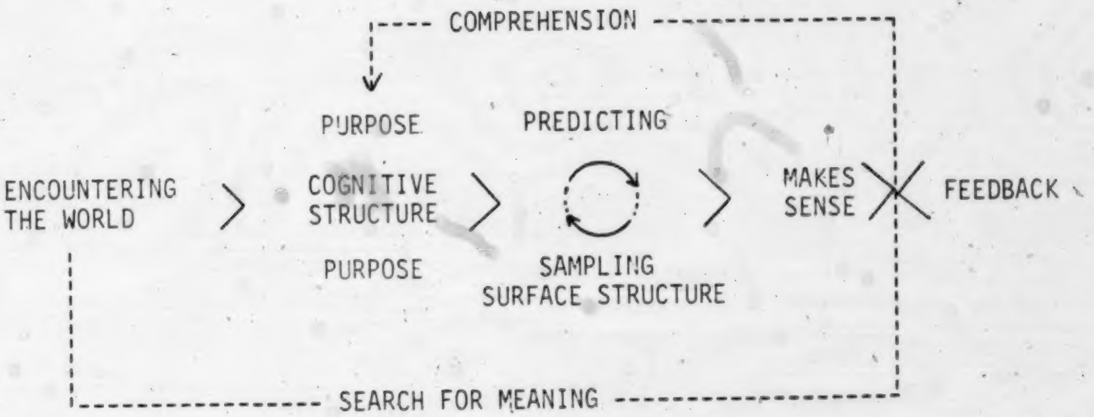

Figure 1

Reading Comprehension
(C. Olson)

Growing out of the description of the reading process and implications for instruction is this major implication concerning the classroom environment. Since there are so many factors relating to a child's reading comprehension that are only partially understood and since the development of language and thinking ability in a child is not directly manipulable, no teacher can tell a child everything he must do to be a proficient reader. For example, a teacher cannot instruct a child how to use his background knowledge in order to comprehend, how to sample print information to confirm or revise his predictions, or how to use discourse structure to predict meaning. Nor can a teacher drill on identified parts of the process without losing the process and the goal.

> Language is indivisible: it ain't no salami that you can slice as thin as you want and still have all the pieces looking like the whole salami. When you break it up, each piece not only changes its relation to the whole but changes its physical characteristics. (Goodman, 1975, p. 628)

Reading must be kept a whole process as much as possible because only in this context can the child actively and intuitively integrate his knowledge about language and the world in order to comprehend what he reads.

Therefore the emphasis is far more on the student learning on his own in an experimenting, trial-and-error process than on the teacher teaching him to read. According to Piaget (1959) the child is the active structurer of his own learning. He approaches a problem as a scientist would in order to find a solution (Smith, 1975). Reading is an example of such a problem-solving process (Stauffer, 1969). In relation to what he knows already, he hypothesizes (i.e., predicts) a solution and experiments (i.e., uses strategies such as sampling print information and/or utilizing the meaning gained from reading) in order to confirm or revise the hypothesis. When he arrives at a solution that makes sense, he incorporates that conclusion into his system of making sense of print for future use, until he encounters further data that would call for any revision of the system.

Further evidence and illustrations that this natural learning process describes growth in reading ability come from studies which have investigated the process of young children learning to read "naturally" (i.e., before school experience and without direct instruction). Durkin (1966) was one of the first to study the characteristics of children who learn to read before entering school. She found that the basic element of the process was the child's interest, curiosity and desire to master reading which caused him to initiate the process of learning to read and motivated parents or siblings to provide help, usually of an indirect and unsystematic nature. More recently, Doake (1978) studied the process in greater detail and confirmed the general outlines of the process suggested by Durkin's work. According to Torrey (1969):

> The key to learning to read may be the child's asking the right question of the environment. If the child does that, he will be able to get the answer from a variety of sources.

Although the child is the active agent, the most important factor in the process, the teacher's role is crucial too. The teacher must create the right kind of environment in which the child can engage in the entire reading process as outlined in this chapter.

She must interact with each child in such a way as to promote the reading/thinking process to a greater and more efficient degree than otherwise possible.

Rosen and Rosen (1973) discuss the teacher's role in creating a learning environment. The five aspects of the teacher's role which they describe can facilitate the child's active development and use of his comprehension strategies.

1. "The teacher creates an informal climate" (p. 228). This is accomplished, in part, by providing time for children to talk with her. She recognizes that the children will do this as she accepts and values the experiences and imagination of each individual. This kind of supportive environment helps the child take risks, i.e., predict when he reads.

2. "The teacher directs attention to children's experiences . . . [Attention] is directed back to the essence of their own lives and the invitation is always to turn their own language upon this world" (p. 228). In this way, new experiences are personalized as they are related to what the child knows already.

3. "The teacher initiates and perpetuates a central role for oral language" (p. 228). Discussion provides children with a wide range of experience with vocabulary and language patterns which help make reading materials predictable. Discussion also helps each child arrive at a purpose for reading and/or receive feedback on his comprehension. This central role for oral language is the foundation for an integrated approach to the language arts, including reading.

4. "The teacher evaluates what is happening and is the judge

of the right moment" (p. 229). The teacher is sensitive to the children's needs and interests. She monitors when it is the 'right' time to move from one kind of expression to another, for example, from discussion to reading to discussion again, or perhaps to reading.

5. "The teacher selects material that will excite and/or interest the children" (p. 229). She listens to children and encourages them to seek out their own sources. And she never turns to the next story in a text just because it is the next story. She reasons that reading is a functional language activity; therefore, she and the children have a purpose in mind when reading.

> The teacher will sometimes introduce a theme, and, more important, encourage new ways of exploring it. She keeps it alive for sustained inquiry and concentration. She helps children to participate, not allowing them to be rubbed out by more boisterous ones and letting the important contributions have time to reverberate. She sets an example of how things may be discussed, she interprets the children's meanings to themselves and she opens up all kinds of possibilities and explorations that the children themselves would not necessarily see for themselves. (Rosen and Rosen, 1973, p. 43)

Thus, through the key role played by the teacher, the classroom environment helps the child relate new information to what he already knows, supports him so he is actively involved in predicting, and provides for the functional use of language and feedback in the problem-solving experience called reading.

OBSERVING COMPREHENSION STRATEGIES

Because of the psychological nature of the reading process, comprehension strategies must be inferred through observation of the behavior of readers when reading and interaction with them following reading. Two such procedures for observing comprehension strategies are useful within this framework.

Olshavsky (1975) used protocol analysis as a means of relating interest, abstractness of concepts and reader proficiency to the repertoire of strategies used by 10 Grade 4 readers to comprehend a short story. The subjects were asked to stop their silent reading of the passage where red dots had been inserted (at the end of each independent clause) and to verbalize their thoughts.

Upon analyzing the protocols, Olshavsky discovered ten major types of comprehension strategies. She found that all subjects used the same strategies although readers with high interest, readers with abstract style materials, and good readers used certain strategies more often. Three of the ten strategies operated at the word level, six at the clause level and one at the story level. However, these results appear to be influenced by the fact that readers were asked to verbalize their thoughts at the end of each independent clause.

In the present study, the dots were placed at junctures in the story where a change of setting or mood is indicated. This placement allows the researcher to tap the readers' comprehension strategies for dealing with larger elements of discourse, for example, events, paragraphs, sustained dialogue, etc.

Goodman and Burke (1972) used unaided recall (after reading) to determine the effectiveness of a reader's comprehension by asking him to reconstruct the author's message in his own words. The unaided recall technique includes open-ended questioning by the researcher using only those names or events to which the reader has already referred. Besides revealing how well a reader comprehends a passage, the way the reader restructures the passage (e.g., time sequence and the inclusion or omission of various details) and the way he answers questions provide clues to his comprehension strategies. This use was not applied by Goodman and Burke but serves the purpose of this study.

These procedures do not impose structures (e.g., specific content questions) or strategies (e.g., What do you think will happen next?) on the reader's thought processes. The reader simply verbalizes his thoughts during and after reading a passage. Thus, the data reveal, to a certain extent, how the reader actively structures his own comprehension.

REVIEW OF CHAPTER II AND OVERVIEW OF CHAPTER III

This chapter examined theory and research concerning the nature and development of the comprehension process in order to create a theoretical framework. Implications for instruction were developed from information regarding essential elements of the process and their relationship to each other. Finally, two procedures for observing comprehension and adaptations for this study were discussed.

Chapter III presents the implications for instruction in an instructional plan. The use of the plan with proficient readers in Grade 4 is described and evaluated using these instructional implications and observational data collected in the classroom.

CHAPTER III

THE INSTRUCTIONAL PLAN AND INSTRUCTIONAL OUTCOMES

Chapter III begins with a discussion of the selection of subjects and the development of the instructional plan. The instructional plan, "What would life have been like for me if I were a pioneer child in Alberta?" is outlined.

Second, the instructional outcomes, i.e., the daily developments of the plan with the children, are described. In particular, the children's progression from dependence on the teacher to self-directed learning is chronicled because it is a key aspect of the instructional environment described in Chapter II which developed in this study. The role of the story-reading experience involving protocol analysis and unaided recall, within the instructional plan, is described. The pilot study and procedure for data gathering are included within the discussion of instructional outcomes.

THE INSTRUCTIONAL PLAN

Selection of Subjects

The teacher/researcher was provided with 13 children, the Grade 4 group of a Grade 4/5 classroom. Of these 13 children, 10 satisfied the requirement of the study for proficient readers: they had achieved above the 75th percentile on the comprehension subtest of the Edmonton Public School Board Standardized Reading Achievement Test administered to them in Grade 3 (Spring, 1977).

Although three children did not qualify, they participated in the instructional plan because they were accustomed to working with the other children. However, these three children were not included in the protocol analysis and unaided recall sessions.

Grade 4 children were chosen because it was considered that they would be more articulate than younger children. Also, the teacher/researcher had taught children at this level but had minimal experience with older children.

Development of the Instructional Plan

Because of the nature of the comprehension process, observing the strategies proficient readers use to comprehend a story within an instructional environment was important. Therefore, an instructional plan was developed which was designed to provide for (1) background experiences, which the child could relate to the story-reading experience, (2) purpose for reading, which the child could create himself, and (3) feedback, so that the child could receive input regarding the effectiveness of his comprehension.

The teacher/researcher recognized a paradox developing from the implications for instruction based on the theoretical framework.

1. The development of the instructional plan was predetermined in accordance with the implications for instruction.

2. In accordance with the same implications for instruction, it was important that the children direct their own learning as much as possible.

The instructional plan was designed to accommodate this paradox. The essential principles set forth in the theoretical framework provided the basic structure for the plan. These were called Process Objectives.

The Process Objectives were then embodied in the content area of Social Studies in a unit about the pioneers of Alberta, suggested in the Alberta curriculum for Grade 4 (1978). The use of a Social Studies unit for this reading study was a direct outcome of a tenet of the theoretical framework: children learn to read by reading to learn. This part of the instructional plan was called Content Objectives.

Thus far, the plan resembled a traditional teacher-structured effort. However, in order for the children to be actively involved, to structure their own learning as much as possible, appropriate activities were not stipulated. Rather, suggestions called Possible Activities were developed for use in the instructional plan. Suggestions made by the children during the course of the study were implemented instead of, or along with, these possibilities. In other words, the children were encouraged to direct their own learning.

The Instructional Plan Outline

Central question: What would life have been like for me if I were a pioneer child in Alberta?

<table>
<tr><th>Process Objectives</th><th>Content Objectives</th><th>Possible Activities</th></tr>
<tr><td colspan="3">Because the reader is the active agent in the comprehension process, the teacher's role is to provide an appropriate environment for the reader to engage in the entire process so that the reader can develop and enhance his comprehension strategies.</td></tr>
<tr><td>Encounter</td><td>I. Raise question - What would life have been like for me if I were a pioneer child in Alberta?</td><td>-read story in newspaper about old-timer
-view photos or paintings of old farm buildings</td></tr>
<tr><td>Because comprehension is a personal search for meaning, the reader must be aware of the purpose for reading and must perceive the purpose as his own.</td><td>II. To consider what information to find to answer the question and how to find it.</td><td>Plan unit together
-discuss what aspects of pioneer life students would like to learn about
-discuss how to find the information.</td></tr>
<tr><td>Because a reader can only comprehend in relation to his cognitive structure, appropriate background knowledge should be reasonably assured or available for most reading situations.</td><td>A. Through firsthand and vicarious experiences, students learn about aspects of pioneer life in which they have expressed interest.</td><td>-visit to John Walter Museum, participate in routines of pioneer life
-visit Provincial Museum, view artifacts and costumes
-view films and/or slides
-study old maps
-read informational material.</td></tr>
<tr><td></td><td>B. Students use above knowledge to formulate questions concerning routines of children in pioneer times
-community
-home-life</td><td>-interview an old timer, interviews are taped and/or transcribed for listening, reading and discussing.</td></tr>
</table>

Process Objectives	Content Objectives	Possible Activities
	-travel -food and clothing -education -entertainment	
Because reading is a meaning-getting process—a "psycholiguistic guessing game" (K. Goodman, 1967), the child should be encouraged to take risks, i.e., predict when he reads. He should be given much time to read in school so that he can develop strategies for comprehending what he reads.	III. Students read stories of pioneer life to add information to; compare with other information.	Pilot -at designated junctures in a story, students stop reading silently and verbally share what they are thinking -students read stories about pioneer life that interest them.
What strategies do children use to comprehend a story?		Data Gathering -at designated junctures in a story, the student stops reading silently and verbally expresses what he is thinking (protocol analysis); after reading, he is asked to tell in his own words what the story was about and probing questions are asked (unaided recall).
Because reading is a purposeful language activity, the reader should be given the opportunity, when appropriate, to use the information in a way that he perceives as valid, thereby receiving feedback on the effectiveness of his comprehension.	IV. Students use all sources of information to: A. Produce an original account of a day in the life of a pioneer child; B. Consider which era they would prefer to live in.	Class members and old-timers participate as audience, debaters, etc.: -radio play -report -story -skit -art work; -debate -panel discussion.

INSTRUCTIONAL OUTCOMES

Encountering the World

Process Objectives	Content Objectives	Possible Activities
Encounter	I. Raise question - What would life have been like for me if I were a pioneer child in Alberta?	-read story in newspaper about old-timer -view photos or paintings of old farm buildings.

The central question was raised in relation to historical data that would hopefully be meaningful to the children: their school and district was named after a pioneer surveyor. None of the children was aware of this fact and it appeared to capture their imaginations. Two children explained to the others the job of surveying with the help of a diagram of a township which the teacher/researcher provided (see Appendix A for diagram). The discussion easily moved from the surveyor to the pioneer settlers who used his maps to choose a section of land. Once on their land, shelter was needed. Sources of materials for shelter were discussed and a few slides of Ukrainian pioneer buildings (Shostak, 1969) were examined. One child related these scenes to the new structures being built on his relatives' farm from materials such as lumber, brick, concrete and shingles. Several remembered seeing similar buildings in their travels.

Some children knew that when pioneers were forced to erect a shelter hurridly or when other suitable materials were not available, they make sod houses. The teacher/researcher read an excerpt from Pioneer Days in Bardo, Alberta (Steen and Hendrickson, 1944) which describes conditions in a sod house when it rains.

> Water leaking through the sod roofs brought with it mud and clay which plastered clothing, bedding and furniture. As rain will come by night as well as by day, one would waken from a sound sleep to find water dripping down all over the room and right into the bed. Some found it better to sleep under the bed. The only other partially dry place would be under the kitchen table but this spot was usually already occupied by the dog. Fortunate indeed were the few who had shingle roofs on their house.
>
> Barns and outbuildings also had sod or straw roofs. No animal could be kept dry during the heavy rains. Mrs. J. Letourneau tells us: "We had a good roof on our house but not so good on out-buildings. Often during heavy rains, we had to take chickens, turkeys, small pigs, and even calves into the house to warm and dry them or they would have died. After the rain was over, I would clean and scrub the house and perhaps next day it would rain again, making it necessary to repeat the performance of moving the barnyard inhabitants into the family residence." The pioneer woman learned not to be squeamish about certain disagreable duties.
>
> Mrs. H. Jensen had a big box in which she used to put the children to keep them dry during heavy rains. Mrs. Ingrid Johnson put the baby in the cradle and then shoved it under the table which would be the driest spot in the house.
>
> One family, it is reported, had to hold an umbrella over the stove when the evening mush was being made otherwise it would have been diluted with too much rain-water and the fire put out. Many families had pieces of canvas stretched over the stoves to keep the fires going during rain storms. If matches were not kept in a dry place, fires could not be lit. The rain-soaked roofs leaked for two days after the rain was over. (p. 132)

The children readily responded to this information. For example, one boy compared living in a sod house when it rains to the discomfort of riding home on his bicycle in a downpour a few days earlier. There was a strong reaction to the experience of eating the "evening mush." For those who did not know what mush was, the children offered graphic descriptions of "gruel." The children also related mush to porridge and baby food.

These examples illustrate the children's constant endeavor to make a school encounter meaningful by relating it to what they already know even as the major question was raised. Teachers tend to cut short descriptions of personal encounters because they believe they are outside the bounds of the discussion. Perhaps the children's contributions do make sense in relation to the new information. For example, in this study the teacher/researcher did not immediately connect the bicycle riding story to living in a sod house. When the teacher/researcher asked the boy, he explained the relationship. In this way, a meaningful bridge was established for most of the children from a personal encounter to the new information since their experience base was similar.

Purpose for Reading

Process Objectives	Content Objectives	Possible Activities
Because comprehension is a personal search for meaning, the reader must be aware of the purpose for reading and must perceive the purpose as his own.	II. To consider what information to find to answer the question and how to find it.	Plan unit together -discuss what aspects of pioneer life students would like to learn about -discuss how to find the information.

The children were less responsive concerning what information they would like to know about pioneers in order to answer the question, "What would life be like for me if I were a pioneer child in Alberta?" They were accustomed to being assigned topics for study. A few shared questions orally but the group was more productive when given time to write their questions. The children read these questions aloud and discussed them briefly. The written questions were organized as they appear in Table 1. In order for the contributions of each child to be recorded, some duplications were inevitable. One child did not contribute any written questions. The questions reveal that the children were again most interested in information which they could relate to their daily lives.

The teacher/researcher asked the children how to find information to answer the questions. The initial response, "books and encyclopedias" came quickly, followed by a long silence. The answer was repeated. Then other alternatives were cautiously suggested: films, slides; visit the museum; talk to an older person. Television was also mentioned but, in general, it did not have much credibility with the group. However, during the course of the study, several children related information from "Professor Kitzel" and "Little House on the Prairie," two television programs.

For most of the children, the study appeared purposeful. *They* were considering ways of finding information to answer *their* questions. Discussion played an important role in the development of a sense of group purpose. For example, when a girl said that members of the group could talk to an older person, one boy suggested a visit to the senior citizens' residence in the neighborhood and another boy, a conversation with a senior citizen in a shopping mall or on the street. ("You see them on the street all the time," he said.) Thus, contributions from individuals heightened group involvement and interest.

Table 1

Questions of Interest to the Children

What would life be like for me, __________, if I were a _________ year old pioneer in Alberta?

1. What would I do all day?
    (a) Would I work harder than I do now?
2. Would my family have much money?
    (a) Could my family afford food?
3. What would I eat?
    (a) Would I get very much candy?
4. What would I wear?
    (a) Would I have a warm winter coat?
    (b) Would I have winter clothes and summer clothes?
5. What about winter?
    (a) What was it like when it snowed?
    (b) What was it like in the sod house when it snowed?
6. How long did it take to make a house?
    (a) How long did it take to fix a house?
    (b) How long would it take to repair the roof?
    (c) What kind of bed was it?
7. Would I go to school?
    (a) What was school like?
    (b) What kind of work would I do in school?
    (c) How hard was school work?
    (d) How long was school?
    (e) Would I go to school as long then as we do now?
8. What would I do with no doctor?
    (a) How would I fix a cut?
    (b) What would I do if I had appendicitis?
9. Were some things the same as they are today?
    (a) Were they making cars in those days?

Developing Background Knowledge

Process Objectives	Content Objectives	Possible Activities
Because a reader can only comprehend in relation to his cognitive structure, appropriate background knowledge should be reasonably assured or available for most reading situations.	A. Through firsthand and vicarious experiences, students learn about aspects of pioneer life in which they have expressed interest.	-visit to John Walter Museum, participate in routines of pioneer life -visit Provincial Museum, view artifacts and costumes -view films and/or slides -study old maps -read informational material.
	B. Students use above knowledge to formulate questions concerning routines of children in pioneer times -community -home-life -travel -food and clothing -education -entertainment	-interview an old timer, interviews are taped and/or transcribed for listening, reading and discussing.

Because of the time factor, the teacher/researcher collected print and non-print materials and set up five learning stations. The children chose partners for four groups. The teacher/researcher explained the nature of the materials at the learning stations and each group decided where it would begin. The five learning stations were:

1. Pioneer life on the prairies, 1812-1900 (Filmstrip, 1972). Pioneers at work and play are depicted through photographs and drawings.

2. Early Edmonton (Slide set, 1975). This set of photographs

of Edmonton and vicinity at the turn of the century was taken by Ernest Brown, a pioneer photographer.

3. Pioneer skills (Slide set, 1970). This set depicts actors making soap, churning butter, etc. in an historical setting.

4. "Lydia Kupsch" (Yedlin, 1976). The teacher/researcher read the biography of Lydia Kupsch, a German pioneer, on tape.

5. Book display:

Alberta at the turn of the century (Holmgren, Ed., 1975). Photographs taken at the turn of the century in Alberta have been published in this volume by the Provincial Archives.

Pioneer days in Bardo, Alberta (Steen et al., 1944). True stories of the adventures of Norwegian pioneers were reproduced from this book by the teacher/researcher.

Pioneer arts and crafts (Guillet, 1968). Instructions for making soap, tanning hides, etc. and recipes are given.

"The prairie pioneers: Their own stories in their own words" (Canadian Magazine, October 16, 1978). This article includes pictures and accounts of pioneer life.

The book display was unexpectedly popular. It had been set up as a relief table if a group finished early at another learning station. However, after listening to the tape, one group asked to spend the remainder of the session at the book display. Individuals could pore over pictures and descriptions in books in their own way and at their own pace whereas the speed of presentation of audiovisual materials depended on group interests. Reading books may have been a more purposeful (and therefore, meaningful) endeavor.

As the children participated at the learning stations, it was evident that they were accustomed to teacher direction. Three examples follow. First, members of one group (three boys) distracted each other continually. The excitement of being together during class time and "getting out of" class work limited any meaningful potential of the experience. Reluctantly, the teacher/researcher adopted the role of policeman with this group. Second, several children asked the teacher/researcher if they should take notes and/or write answers to their questions (which had been mimeographed and distributed). The purpose of taking notes was discussed, i.e., to record and preserve information for future use if one cannot remember it. At this point, they decided they could remember the information. Third, a group complained that the commentary for some of the slides was too lengthy and detailed. They wondered if they could continue on to later slides in the set. The reason for examining the slides was discussed, i.e., to find background information concerning the life of a child in pioneer times that was important to them. They decided to omit the sequence which comprised photographs of a railroad depot and environs.

The learning stations appeared to provide some background experiences which the children could relate to other experiences later in the study. For example, a by-product of the study was their increased awareness of the aging process. Each group who listened to the tape of Lydia Kupsch's pioneer days as a young girl in Alberta marvelled at the age she would be now and wondered if she had died. This experience seemed to provide the background for their initial acceptance of and respect for Mrs. Stainton, the 81 year old speaker who later addressed the group. Another example, several children related the slides of Pioneer Skills to the artifacts they later saw at Fort Edmonton, such as a butter churn and stone oven.

Despite these examples of usefulness, the background experiences at the learning stations would probably have been more meaningful for the children if they had secured the print and non-print resources themselves. For example, they could have examined catalogs available at the school and written letters to museums or historical societies requesting brochures, charts, pamphlets, etc. These activities were not feasible because of limited time in the study in relation to the need for the students to become more self-directed, as opposed to teacher-directed, in their work. However, the possibilities for children's involvement at this stage of planning would be a worthwhile investment of time in classroom situations. In this context, writing letters and filling order forms would be purposeful endeavors.

The next background experience involved an afternoon visit to the Fort Edmonton and 1885 Street Museum. Guides in several buildings explained the significance of furnishings and artifacts and also gave accounts of the people who had lived there. At the Fort, the children watched a blacksmith and baker at work. However, most of their interest centered on 1885 Street. In one house, they sat on benches by the large kitchen table and leaned their elbows on the oilcloth tablecoth. They wondered how the spinning wheel and the cream separator worked but the guide could not explain either procedure. They took pictures of the pony tied in the yard and checked the outhouse door. They took turns sitting in the buggy and wagon in the livery stable. They enjoyed locking each other in the jail cells but did not seem to notice that the cramped quarters of each cell were occupied by only a short, narrow cot.

A highlight of the afternoon was buying licorice whips, raspberry drops and all day suckers at the drug store. One mother who accompanied the group wondered if the half-hour spent in the drug store was not wasted time. A girl responded, "That's what makes it." That's what "made it," too, for pioneer children accompanying their parents to town.

The second highlight was riding in a wagon behind two Clydesdales guided by a burly driver. Two boys sat up with the driver. It was a bumpy ride and several children said a long ride would be very uncomfortable. They imagined that a winter ride would be very cold.

A girl summed up the experience in a way which appeared to represent the group's general attitude. "These were great times, weren't they!" Students appeared to have enjoyed the novelty of the experience and had not generally identified with the hardships of the times.

The final background experience provided for in the instructional plan was a talk given by Mrs. Stainton, who had been a pioneer child in Alberta. She preferred that the children ask questions after her talk. Her appeal to the children is evident in the following excerpts from the transcript of her taped talk. The children's responses are coded CR.

In the summertime there was lovely wild fruit. The land was new. Because it was so new, there was an abundance of wild strawberries.

CR Mmm

And raspberries

CR Mmm

And saskatoons

CR Mmm!

Bush cranberries

CR Mmm. You're making me hungry! (laughter)

My brother and I, when we were small, we used to get a chance to pick berries. My mother would go out and sometimes father came with her when he wasn't too busy. And they would take big pails or big metal cans and they would pick these pails full, dump them into the can. We were each given a cup and we were greatly encouraged to fill those cups and also dump them in the can. For two reasons: if we ate too many berries, mother thought we might be sick; and, it was a good thing to fill up can as fast as possible. Well, she used to preserve this fruit you know. We had quite a bit—we had all summer. Strawberries with cream are really good you know.

CR Yaaa!

Saskatoons and cream or raspberries and cream plus sugar . . . We enjoyed all those things. And you notice I didn't mention meat on the grocery list because living on the homestead they had cattle but no refrigeration, you see. So there was no way of keeping beef so we had beef in the winter time. The meat was frozen—the weather was cold enough to freeze meat, I'm telling you. And in summer, they had pork. They used to cure the hams and salt the rest of the meat. And they had what they called a milk house which was a dug-out in the ground—about 3 or 4 feet down in the ground with slabs around it—slabs are boards you know. And often it had a sort of sod roof on top. You'd go down two or three steps. You'd open the door, go in there and it was cool in there. It was amazing how cool it could be. So you'd put your pork barrel in there. And also the milk 'cause in those days there were no cream separators. They used to strain the milk into little milk pans—oh, about 9 inches in diameter—like this you know and set that down on the floor and mother used to put those pans on a board that had cheese cloth around it to keep the dust out. After they sat so many hours, the cream would be skimmed off—it would all come to the top. We skimmed off into a crock and that would be saved to churn into butter. Well, that was a lot of hard work. But children had lots of fun, young children especially, on the farms. We loved to roam around and we loved the young things—the little calves and colts . . .

CR Mmm

Even little pigs.

CR (Laughter)

Mind you, I had a little pet pig one time.

CR Huh

I'll have to tell you about that little pig. There was a large litter of pigs and my father said, "You know that one is a little runt. It'll never get any food." He said,"It'll be crowded out." So he said, "I think I'll take it out." I was just a small girl then—I suppose about five. He said, "How would you like to take care of that pig?" Well, I thought it was fun. It was so cute, such a little pig. So here I would be, a little girl, sitting in the grass, with warm milk in a teaspoon. I'd be opening his little mouth and pouring in one teaspoon of milk at a time. Well, that was a lot of fun. I called it Runty

CR (Laughter)

because my father had called it a little runt. And so, he would chase me around the yard, you know, when he was hungry, squealing to be fed. Very soon he had to have a bigger vessel than a cup to put his head in and drink. As the summer went by, it grew and it grew and finally my father said, "That pig is a nuisance running around this yard! I think I'll throw him back in the pen with the others." I said, "Well . . ." He said, "He's really not a runt anymore." So he threw him back in the pen. I'd go up to the fence and call "Runty! Runty!" and the little rascall never bothered about me! All he was interested in was food

CR (Giggling)

and I'd see him at the trough, eating with the others. I was quite disappointed in Runty so I never had another pet pig. Never!

CR (Laughter)

I used to beg my father to let me help him feed the calves and by and by, as I got older, it was one of my duties and I wasn't very happy about it sometimes. When I was small, I thought it was lovely to go there, see the calf put its head in the bucket, watch it drinking. And I did like the little puppies and the kittens.

CR Mmm

But then, when I got old enough to go to school, I had a mile and a half to walk . . .

From Mrs. Stainton, the children received a balanced view of the joys and hardships of pioneer life. This view was later reflected when they considered if they would prefer to live in pioneer times. Mrs. Stainton's talk appeared to help the study of pioneer life "come alive" for each child. Following her presentation, each child appeared to participate actively and enthusiastically in each activity.

This change in attitude helped the teacher/researcher evaluate the effectiveness of the activities provided for the children's development of background experiences. The children were able to relate Mrs. Stainton's childhood experiences most easily to their own because Mrs. Stainton had presented the pioneer world from a child's point of view. The experiences in the buildings at the museum lacked the charm and intimacy of her stories. The experiences at the learning stations were even further removed from the children's experience of the world. Perhaps some of the initial lack of involvement on the part of some children could have been avoided if they had been given the opportunity early in the study to relate the more salient aspects of pioneer life as presented by Mrs. Stainton to their own lives. This personalized information would likely have made the search for further information at the museum and classroom learning stations more meaningful.

Predicting/Sampling Surface Structure/ Confirming or Revising Predictions

Process Objectives	Content Objectives	Possible Activities
Because reading is a meaning-getting process (a psycholinguistic guessing game) the child should be encouraged to take risks, i.e., predict when he reads. He should be given much time to read in school so that he can develop strategies for comprehending what he reads.	III. Students read stories of pioneer life to add information to; compare with other information.	Pilot -at designated junctures in a story, students stop reading silently and verbally share what they are thinking. -students read stories about pioneer life that interest them.
What strategies do children use to comprehend a story?		Data Gathering -at designated junctures in a story, the student stops reading silently and verbally expresses what he is thinking (protocol analysis); after reading, he is asked to tell in his own words what the story was about and probing questions are asked (unaided recall).

At this point, the past experiences in the study were reviewed. The teacher/researcher asked if there was any other way to find information about pioneers. The group discussed the usefulness of an encyclopedia for answering the central question, "What would life be like for me if I were a pioneer child in Alberta?" One boy did not think that an encyclopedia would be useful because the group was interested in finding information about pioneer children whereas an encyclopedia provided information on pioneers in general. A girl added that an encyclopedia would tell about important dates rather than the daily life of pioneers.

None of the children mentioned stories as another way to find information so the teacher/researcher suggested it. The consensus of the group was that a story would have to be "real" to provide information, i.e., not necessarily true (e.g., biography) but true-to-life. "It could have happened," is the way one girl expressed it.

The Pilot Study

Following this introduction, the teacher/researcher presented each child with a copy of the story, "Birthday," a chapter from Farmer Boy by Laura Ingalls Wilder (1933). (See Appendix B for "Birthday.")

The teacher/researcher had placed a red dot at each juncture in the story where there is a change of setting or episode (dots 1, 2, 5, 9, 10, 11, 12), at points which introduce or add another element of conflict (dots 3, 6), at moments of climax (dots 7, 8) and at moments of conflict resolution (dot 4). The teacher/researcher asked the children to read silently until they encountered a red dot, then stop reading and share aloud what they were thinking while they were reading.

This experience served as a pilot for the individual protocol analysis research. There were two major concerns.

1. Were the instructions clear? It was important that the instructions would not indicate to the children any strategies they might use because the purpose of this study was to observe how children structure the story-reading experience. Oral sharing

of comments without the teacher's intervention would hopefully provide a wide range of examples for "telling what you are thinking about."

2. Would the children be able to express what they were thinking? A verbal indicator of the comprehension process had been chosen. The verbal fluency of individuals was an unknown factor. What would the children say and how much would their comments reveal? Would their comments reflect the strategies they were using or would they choose a specific response pattern (e.g., retell details) or worse, say nothing?

The children seemed excited about this new experience and eagerly began to read. They volunteered a variety of comments. Most of the children's responses were easily grouped into five categories.

1. Predicting. A repeated concern was, "What will happen next?" For example, Mother says, "You fill the woodbox, Almanzo, ... And then there's other things you can do" (p. 56). A common response was "I'm wondering what other things."

2. Relating experiences of story characters to personal experiences. For example, "in his right hand he held a doughnut, and in his left hand two cookies. He took a bite of doughnut and then a bite of cooky" (p. 58). One response: "Eating that many doughnuts in front of his father! His father should say something. If it was me, my dad would be so mad."

3. Relating experiences of story characters to experiences provided in the instructional environment. Several children reacted to the number of cookies and doughnuts Almanzo ate. One child could not comprehend this gluttony in terms of the pioneer hardships he had

learned about. "They must've had more money to buy all that flour to make all those doughnuts!"

4. Inferring emotions of story characters. A common reaction to the first part read (pp. 49, 50) was that Almanzo must be very angry and frustrated with his mother for demanding that he eat his breakfast before seeing his present. When he ate quickly, his mother commanded him to take smaller mouthfuls.

5. Failing to comprehend. For example, "The troughs were coated with ice, and the pump handle was so cold that it burned like fire if you touched it with a bare finger" (p. 62). Response: "How can ice burn? I don't understand that."

The pilot experience indicated that the instructions were clear and that protocol analysis would provide insight into the comprehension process in terms of the theoretical framework which had been developed.

Through this experience, the teacher/researcher also gained interesting information regarding the development of the instructional environment. The children made their own decisions: they listened to each other and sometimes explained or expanded the response of another child; they were models of responsible behavior. Several children suggested it would be a good idea to use the procedure again. All appeared pleased and some were excited that they could take home their copies of the story. They responded favorably when the teacher/researcher asked if they would like to read more about Almanzo and pioneer life. Thus, the children had structured their own learning experience to a large extent.

Procedure for Data Gathering

Choice of text. The text chosen for protocol analysis and unaided recall research included the final two chapters in *Farmer Boy* (Wilder, 1933), "Mr. Thompson's Pocketbook" and "Farmer Boy" (see Appendix C). This text was chosen on the basis of Fry's Readability Scale (1967) which placed readability at fourth grade after the criterion of a realistic pioneer story was satisfied.

Literary discourse in story format was chosen as the type of passage to be read by the children since it was thought that this was the type of language function and task (Halliday, 1969) that children would certainly have had much experience with by Grade 4. This is an important criterion since the study was designed to investigate readers' comprehension strategies, especially as they relate to elements of discourse structure. Thus, it was necessary to ensure that the type of discourse encountered by the children was familiar so that results would not be unduly affected by their lack of knowledge of the discourse structure in the passage.

Most important, the children wanted to continue reading about Almanzo to find out more about pioneer life; therefore, it was appropriate to use this previously selected text from the same book as "Birthday" (Almanzo again is the major character). In short, it served as purposeful reading, thus fulfilling one of the characteristics of the comprehension process identified in Chapter II.

Placement of red dots. Red dots, to indicate points where subjects were to stop and verbalize their thoughts during the reading, were placed at intervals dictated by the structure of the discourse.

The placement of these dots is indicated in the copy of the passage (Appendix C). Dots were placed at changes of setting or episode (dots 1, 2, 4, 5, 13, 14), at points which introduce or add another element of conflict (dots 3, 7, 9, 10, 12, 15, 16), at moments of climax (dots 6, 17, 18), and at moments of conflict resolution (dots 8, 11, 19). The researcher considered that these "natural" divisions would provide opportunities to achieve the purpose of the study without unduly segmenting the story.

Protocol analysis and unaided recall. The data gathering procedure took place in the school library. A cardboard screen separated the child and teacher/researcher from other groups using the library. At the beginning of the private session, the child and teacher/researcher talked briefly about the group protocol analysis experience including the children's wish to read more about Almanzo. Then the teacher/researcher told the subject, "This story is about Almanzo, too. Would you like to read it? I will read you some directions. I will read them because I want them to be exactly the same for everybody. Here they are.

1. You will be given a story to read silently.

2. You should read the story silently but stop reading when you come to a red dot. At the dot, talk about what you were thinking as you read that part of the story.

3. You should continue reading and talking this way until you finish reading the story; read and talk as though you were alone, you will not be interrupted.

4. You will be tape-recorded." (Adapted from Olshavsky, 1975, p. 63)

5. "When you have finished reading and talking, you will retell the story to me as if you were telling it to a friend." (Adapted from Goodman and Burke, 1972, p. 25)

"Are there any questions?"

The cassette tape was started. Only one child was confused about the instructions. She read past the first red dot without speaking. The teacher/researcher re-read the directions and the child continued to read the story and talk at appropriate intervals.

Following each child's reading-talking experience, the teacher/researcher asked the child to tell about the story. The child gave an unaided recall which was taped. While the child talked, the teacher/researcher numbered a pre-determined list of story events according to the child's order of presentation. (See Appendix D for story events.) When the child finished, the teacher/researcher asked, "Anything else?" The child either stated more information or said "No."

In order to find out more about the child's comprehension strategies, the teacher/researcher asked several questions based on the information the child had already provided. The questions were grouped into three categories.

1. Character Analysis

What was ______________ like?
(name of character)
Who else was in the story?
What was he/she like?

2. Plot

What was the problem the story was trying to solve?
Anything else?

3. Theme

What do you think the story was trying to tell you?
Anything else?

(Adapted from Goodman and Burke, 1972, p. 26)

These questions ended the individual protocol and unaided recall session. Later, the responses were transcribed and categories of responses were developed. In Chapter IV, the responses are presented and categorized in order to answer the two research questions.

Feedback

Process Objectives	Content Objectives	Possible Activities
Because reading is a purposeful language activity, the reader should be given the opportunity, when appropriate, to use the information in a way that he perceives as valid, thereby receiving feedback on the effectiveness of his comprehension.	IV. Students use all sources of information to:	Class members and old-timers participate as audience, debaters, etc.:
	A. Produce an original account of a day in the life of a pioneer child;	-radio play -report -story -skit -art work;
	B. Consider which era they would prefer to live in.	-debate -panel discussion.

Following the individual story-reading experiences, the children met to discuss what they had learned and to determine how to preserve the information so others could benefit from their findings. While discussing what they had learned, the teacher/researcher asked in which era they would prefer to live. Most of the children decided they preferred the present era because of the many conveniences they enjoy. At the same time, they expressed a desire to return to pioneer times "for a visit," preferably in the summertime. One boy, who had a great deal of experience in the out-of-doors with his father (e.g., building a log cabin) stated a preference for living in the pioneer times. When the other children questioned him concerning the hardships of winter life in pioneer times, he enumerated some of his outdoor skills which included building and lighting a fire, and hiking through the wilderness in search of game.

Because of the general consensus of the group, there was no purpose for a debate. Therefore, the children and teacher/researcher began to discuss possible procedures for preserving the information. One girl suggested that individuals in the group could tell others what they had learned. However, because oral communication lacks permanence, the children explored other possibilities including making a tape of the information, or writing a story and drawing pictures. Each member of the group appeared enthusiastic when a boy suggested they could produce a play. The children quickly resolved that the play should present a day in the life of a pioneer child. They had also considered a comparison between life in pioneer times and the present but decided that it would be too difficult to stage.

The children discussed the needs for production of the play which included: (1) a script, (2) background scenery and effects, (3) clothing, (4) props. Each child volunteered to be responsible for one area of production in particular. The children discussed essential elements in the play; waking up in the morning, doing chores, going to school, participating in a community picnic, riding home.

Because of other commitments, the teacher/researcher could not take time with the children except for two half-hour sessions and during the morning of the presentation of the play.

Three children volunteered to write the script. They included the elements discussed by the group and provided a speaking role for each group member. This script was presented to the teacher/researcher in typed format for duplication and distribution to other group members. It is reproduced here as a child typed it except that numbers have replaced names of children in the study and typographical errors have been corrected.

The Life of Pioneer Children

Script Writers: 1, 8, 2

Background: 5, 9, 10

Clothing: 3, 4, 7

Props: 6

Scene 1

Narrator: A family of nine woke up to the crowing of the rooster on April 5th, 1888.

Tom: Wakey, wakey, rise and shine!

Alfred: Oh, DO we have to?

Joane: (sigh) We have to!

Carol: Be quiet! I'm trying to sleep.

Harold: What's going on?

Tom: Breakfast!

Harold: Breakfast? That's for me!

Susan: Harold, stop thinking about your food!

Harold: So, I get hungry in the morning. You always think I'm hungry!

Dick: Quiet! Ma and Pa are coming!

Father: Come on you lazy lot! We,ve got work to do!

Harold: What about breakfast?

Mother: And then we'll all have big, fat, flapjacks with syrup!

Dick: Come on! Let's go!

Tom: Hurry up kids!

All: (children) Let's go!

Scene 2

Narrator: The children quickly got dressed and started working.

Father: Now Tom, you can feed the pigs. Joane, Carol and Susan can feed the chickens, the cows, and the horses. Dick, you and Harold can clean the stalls and the barn. Alfred . . . you come with me.

Alfred: Yes?

Father: How would you like to help me with the breaking of the colts, you won't learn any younger.

Alfred: Really?

Father: Really, we'll start tomorrow . . . okay?

Alfred: You betcha!

Mother: Breakfast! Come on, get it while it's hot!

All: Coming!

Scene 3

Narrator: After school the children come home and find they are going to a picnic.

Teacher: Class dismissed.

All: Hoooraaay!

Teacher: Oh, Dick, may I see you for a minute, please?

Dick: Yes?

Teacher: Dick, you got an A on your test!

Dick: Really?

Teacher: Yes! Here's your certificate.

Tom, Alfred (etc.): Let's go home.

Narrator: The girls raced the boys home, then . . .

Mother: Boys, girls, guess what?

Children: What?

Mother: We're going to a picnic today!

Children: Really?

Dick: Honestly . . . you aren't joking are you?

Mother: No, I'm not joking, well, come on, let's get going.

Scene 4

Narrator: The children and their parents climbed on their wagon and headed for a tall oak tree where other townspeople were waiting.

Teacher: Ah, we must do this again.

Father: Are we ready to start?

All: Yes!

Father: Okay, we'll start with some games, then some races, and then we'll eat!

Scene 5

Narrator: The townspeople played some games with laughter and fun.

Father: The races are girls, boys, women, men.

Women: We have a big bunch of food getting cold, we could do the races after.

Father: Well . . . shall we?

All (except women): Okay.

Scene 6

Narrator: After eating and having the races the people start saying goodbye and then leave for home.

Tom: That was fun!

Harold: Yes, it sure was.

Susan: Mama, can we do that again?

Mother: Yes, dear, we'll do it again.

Susan: When?

Mother: Next month, is that okay?

Susan: Yes mama, that's perfect.

The End

Obviously, the writers used their knowledge concerning the proper form for a play when writing it. For example, they correctly used punctuation; they divided the play into scenes based on the elements of the play discussed in class; they provided for a narrator to clarify the plot. As well, each child in the group was able to use his knowledge about the form of plays to correctly interpret his role. Thus, the children integrated sources of knowledge unknown to the teacher/researcher with knowledge gained during the study to produce the play.

The children discussed their duplicated copies of the script and decided that further information regarding the school experiences of pioneer children should be included in the play. The script writers complied with the following two scenes.

Scene 3

Narrator: The children go off to school.

All: Bye Mom.

Mother: Bye children.

Harold: You know, Joane, school is not good any more, we do not get a snack.

Joane: Stop thinking about food.

Harold: I can't help it if I get hungry.

Tome: Come on, we have to go!

All except Tom: O.K.

Scene 4

Narrator: The children get to school.

Joane: What are we doing today?

Miss Cravets: Be quiet or go to the corner!

Carol: Teacher, may I go to the outhouse?

Miss Cravets: Yes, you may.

Joane: I brought the box for crayons.

Miss Cravets: Good.

Joane: Miss Cravets, Harold is eating in school.

Harold: It's just a carrot. I'm hungry!

Miss Cravets: Go to the corner. I want everyone to do three lessons in your TDAS books.

(Scene 3 of the original copy became Scene 5, and so on.)

The children altered the original Scene 4 to include performances by several cast members at the picnic because they had learned from Mrs. Stainton that pioneers provided their own entertainment at social gatherings. Father performed a magic act which included pulling a rabbit from a hat. Tom played "Mary Had a Little Lamb" on his recorder. Carol danced "The Highland Fling" while everyone clapped in rhythm and Susan played "Aura Lee," "Greensleeves" and "Skip to my Lou" on the piano. All cast members danced during the final number. The children recognized that it was unlikely that a piano would be brought to a pioneer settlement or hauled to a picnic site. However, they felt that the suitable choice of music compensated for this unrealistic element.

The classroom teacher helped the children learn their lines. The teacher/researcher helped them stage the play. The children produced two background scenes in colored chalk on a portable reversible blackboard. One scene depicted the interior of a pioneer home and the other the picnic site. The children developed suitable stage action and gestures to complement their spoken parts. For example, in Scene 5, Miss Cravets asked Dick to stay after school. The other children agreed to hurry out of the school and peek through imaginary windows to see what would happen.

The children brought wagonloads of props that included cold pancakes, pea-shooters, lunch pails and slates. Sound effects of a rooster crowing and barnyard animals were provided by a girl who had taped them on a weekend visit to a farm.

The enthusiasm engendered by this self-directed activity resulted in the involvement of parents. One mother helped her daughter make home-made ice cream for the picnic scene. A mother chose a tartan worn by settlers in Alberta at the turn of the century for her daughter's dance number in the picnic scene. Several mothers brought props that were too heavy or too fragile for their children to carry.

The children decided that the Grade 5 members of their classroom could attend the play. A Grade 2 class was invited because several children were younger siblings of the cast. They also invited their French teacher and the principal. Some children were excitedly nervous because their parents were attending but they all wanted them to be there. Finally, the teacher/researcher requested that the Junior Adaptation class attend.

Following the play, several parents discussed the play with the teacher/researcher. They stated that they were pleased that the play had been written and produced by the children. They noted that it was not as polished a performance as a teacher-directed effort could be. However, they expressed delight at the children's innovations. For example, the wagon ride to the picnic was comical. The wagon was outfitted with reins, a wagon-master was driving, but foot-power rather than horse power got the contraption to the picnic. Thus, the parents enjoyed experiencing pioneer days in Alberta from their children's point of view.

The children's peers also enjoyed the play. They clapped spontaneously in rhythm while the cast danced and clapped in the picnic scene. Following the play, several students expressed their enjoyment to the teacher/researcher and many congratulated the members of the cast.

The children, too, were excited about their performance. They hurried to tell the French teacher, who had been unable to attend, of its success. After all the chairs had been folded and put away and the last of the props had been gathered, a child paused to express the group consensus, "We did good, didn't we."

REVIEW OF CHAPTER III AND OVERVIEW OF CHAPTER IV

This chapter examined the development of an instructional plan and environment. One important characteristic of the environment was that each Grade 4 proficient reader gradually became involved in a personal discovery of a particular topic, i.e., life as a pioneer child in Alberta. Protocol analysis and unaided recall of a story operated within the instructional plan because of the importance of background experiences, purpose for reading, predicting and feedback for comprehension.

In Chapter IV, categories of responses for protocol analysis and unaided recall are defined. The findings are described and evaluated in terms of the two research questions posed in Chapter I.

CHAPTER IV

FINDINGS OF RESEARCH: COMPREHENSION STRATEGIES

Two research questions were presented in Chapter 1. The discussion of findings in this chapter addresses these questions.

1. What comprehension strategies do proficient readers in the study use when reading a story which they encounter within an instructional environment designed to be conducive to the comprehension process?

2. In what ways does the instructional environment influence the comprehension strategies used by the subjects in the study?

First, this chapter deals with findings of protocol analysis as they relate to both research questions. Children's responses for the protocols are categorized into general types, each category is defined and clarified through the use of a sample protocol, and the inter-rater reliability of response categorization is reported.

Second, the children's responses per category are discussed in response to both questions. Tables of figures and percentages are included from which two general response patterns are identified. Response characteristics of the two groups are discussed, including the comparison of responses of a typical Group 1 child and a typical Group 2 child.

Third, both questions are examined through an analysis of unaided recalls and responses to probing questions which followed the reading of the story from Farmer Boy (Wilder, 1933).

Finally, the relationship of the findings to the research questions is summarized.

ANALYSIS OF PROTOCOL RESPONSES

Categories of protocols or comprehension strategies were developed after an examination of the data in order to effectively represent the information gathered. Each response given by a subject at a red dot was considered a unit. Two, and (rarely) three strategies were evident in some units. However, one unit was usually characterized by one strategy. Oral language features such as mazes and pauses were not considered strategies and, therefore, were not included within response categorization. No unit was incomprehensible although there were eight dots where no response was given by one or two subjects.

An outline of the categories appears below, followed by definitions and examples.

Categories of Comprehension Strategies Used in Protocol Analysis

Category A: Extending beyond given information

- A1 Factual speculation concerning information other than pioneer life
- A2 Inferring
- A3 Asking a question

Category B: Relating story information to purpose for reading

- B1 Identification with character
- B2 Identification with situation
- B3 Factual speculation concerning pioneer life

Category C: Using background knowledge for comprehension

- C1 Using personal experience
- C2 Using instructional experience

Category D: Reducing alternatives for continued story action

- D1 Predicting
- D2 Revising a prediction
- D3 Confirming a prediction

Category E: Retelling

Category F: Failing to comprehend

Definition of Categories

Category A responses were those in which subjects extended beyond information provided in the story except where subjects' responses were related to their purpose for reading (Category B). Since purpose for reading is a major aspect of the model of reading upon which this study is based, such responses were kept in the second category.

A1. Factual speculation concerning information other than pioneer life. Subjects speculated about information not included in the story on the basis of facts presented.

> e.g. I was wondering why Almanzo didn't hit Mr. Thompson when he called him a thief. (Dot 8)

A2. Inferring. Subjects drew conclusions about characters' emotions and attitudes on the basis of dialogue and/or action. At times, personal identification with a character was evident in relation to story elements other than the pioneer theme.

> e.g. I think that Almanzo is—that his father trusts Almanzo a lot, that he's giving him the choice of what he wants—that he's letting him pick what he wants to be. (Dot 18)

A3. Asking a question. Subjects indicated they were thinking ahead by asking open-ended questions which focused on major action at that point in the story.

> e.g. I wondered what Almanzo is going to do when his dad said he could keep the money. (Dot 11)

Category B responses were those in which subjects related story information to their purpose for reading. The central question of the unit was "What would life be like for me if I were a pioneer child in Alberta?" This purpose was reflected when subjects considered what life would have been like for them if they were pioneer children. As stated earlier, Category B is a particular instance of Category A.

B1. Identification with a character. Subjects expressed personal identification with a character which would require them to return to pioneer times to fulfill.

> e.g. Well, I think it would be fun working a haypress. I think Almanzo was really having fun working the haypress. (Dot 1)

B2. Identification with a situation. Subjects expressed personal identification with a situation which would require them to return to pioneer times to fulfill.

> e.g. In the last paragraph, well, "the air was clean and cold and the sky was blue and all the snowy fields were sparkling." What it was like, well, I would like to be there to see because it sounds so pretty. (Dot 3)

B3. Factual speculation concerning pioneer life. Subjects speculated about what pioneer life was like on the basis of facts presented in the story.

> e.g. I'm wondering if they have just about the same food every night. (Dot 16)

Category C responses were those in which subjects related personal and instructional experiences to story information as rationale for predicting (D1) and inferring (A2) responses. Subjects used Category B only for these purposes. Once again, this category was included separately because of its importance in the model of reading used in this study.

C1. *Using personal background experiences*. Subjects related experiences not provided for in the instructional setting. C1 is underlined in the example.

> e.g. D1 | Well, I bet Almanzo's mother isn't gonna like it, you know. Her son would have to go to school, you know—what he hates *just like what people in our school hate—going to school*. I think he might get the job—might not get the job, I should say. (Dot 15) | D1

C2. *Using instructional experiences*. Subjects related experiences provided for in the instructional setting. C2 is underlined in the example.

> e.g. A2 | Almanzo must have been really mad at Mr. Thompson—Otherwise he wouldn't have given the nickel back *because a nickel meant quite a lot*. (Dot 8)

(The different value of money in pioneer times was discussed during the unit.)

Category D responses were those in which subjects reduced the alternatives for continued story action to one or two.

D1. *Predicting*. Subjects suggested possible plot sequences.

> e.g. O boy! He's just said, "Hand him $200." And he's rather scared 'cause Mr. Paddock's probably bigger than he is—he's probably going to give—he's probably going to get $200—'cause he doesn't want to suffer the consequences. (Dot 9)

D2. Revising a prediction. Subjects referred to a previous prediction and changed it.

> e.g. Well, I guess I take—I kind of take back what I said about him not doing it very well 'cause he seems to be doing it pretty good. I think he'd make a good hay-baler so Mr. Weed's going to offer him a job or something. | D1 (Dot 2)

D3. Confirming a prediction. Subjects affirmed that a prediction made earlier was correct.

> e.g. Well, when I read this over, it said um he was wondering if he could—if he had enough money to buy a little colt and that's exactly what I said before so I wonder what he'll get next. | A3 (Dot 13)

Category E responses were those in which subjects retold information from the story as their only strategy at that point. This category does not include those frequent instances when subjects retold information in the passage as a basis for their primary strategy (see examples for A1, A2, A3, B1, B2, B3, D1, D3).

> e.g. They asked Mr. Thompson if he had lost his pocketbook. (Dot 6)

Category F responses were those in which the subjects indicated they did not understand what something was or why something was done.

> e.g. Through all these paragraphs, I was thinking what a wheelright is. (Dot 14)

Reliability of Response Categorization

After the responses had been categorized by the researcher, one independent judge was asked to categorize the protocols in order to determine the reliability of the system. The protocols of three children were randomly selected and the judge categorized the children's responses on the basis of the above written definitions and examples. Inter-rater reliability between the researcher and judge was calculated at .89 (Feifel and Lorge, 1950).

TABULATION OF RESPONSES

Table 2 indicates the number of responses given by each child for each category and sub-category in protocol analysis. Table 2 has been translated to percentage equivalents because the number of responses for each unit varied for different children. Thus, Table 3 indicates the percentage use of categories and sub-categories by each child in protocol analysis.

Percentage totals for each category indicate that the most frequently used strategy was Category A (extending beyond given information) which accounted for 45% of the responses. The related response category, Category B (relating story information to purpose for reading) accounted for another 11% of the responses, making the total inference percentage 56%.

The next most frequently used strategy was Category D (reducing alternatives for continued story action) which was used 26% of the time.

Category C (using background knowledge for comprehension), i.e. as a rationale for Category D1 (predicting) or Category A2 (inferring) responses, was used 12% of the time. A lower percentage of responses in Category C indicates that although background experiences are essential as a rational for predicting, they are not always stated. Perhaps, experiences that have been internalized to the extent that

Table 2

Number of Responses Given by Each Child in Protocol Analysis

Category	Child 1	2	3	4	5	6	7	8	9	10	Total
A1	4	4	1	4	0	3	5	0	2	8	31
A2	10	5	3	3	11	6	2	10	6	6	62
A3	0	0	5	3	0	0	2	0	1	0	11
Total A	14	9	9	10	11	9	9	10	9	14	104
B1	1	0	0	0	2	2	0	0	1	0	6
B2	1	0	1	4	0	0	0	0	0	0	6
B3	1	1	2	0	0	0	3	0	0	4	11
Total B	3	1	3	4	2	2	3	0	1	4	23
C1	3	0	1	1	0	0	0	7	3	2	17
C2	0	0	0	0	0	5	0	0	3	3	11
Total C	3	0	1	1	0	5	0	7	6	5	28
D1	4	1	6	9	1	4	6	6	9	8	54
D2	0	0	0	0	0	0	0	1	2	0	3
D3	0	0	0	1	0	0	0	1	1	0	3
Total D	4	1	6	10	1	4	6	8	12	8	60
E	0	4	0	0	2	0	0	0	0	0	6
F	2	0	2	0	0	0	1	1	0	1	7
Total Responses	26	15	21	25	16	20	19	26	28	32	228

Table 3

Approximate Percentage Use of Response Categories by Each Child in Protocol Analysis

	Child										% of Total Responses
Category	1	2	3	4	5	6	7	8	9	10	
A1	15	27	5	16	0	15	26	0	8	24	14
A2	38	34	14	12	68	30	11	38	21	19	26
A3	0	0	24	12	0	0	11	0	3	0	5
Total A	53	61	43	40	68	45	48	38	32	43	45
B1	4	0	0	0	13	10	0	0	3	0	3
B2	4	0	5	16	0	0	0	0	0	0	3
B3	4	6	9	0	0	0	16	0	0	13	5
Total B	12	6	14	16	13	10	16	0	3	13	11
C1	12	0	5	4	0	0	0	28	11	6	7
C2	0	0	0	0	0	25	0	0	11	9	5
Total C	12	0	5	4	0	25	0	28	22	15	12
D1	15	6	29	36	6	20	31	23	32	25	24
D2	0	0	0	0	0	0	0	3	8	0	1
D3	0	0	0	4	0	0	0	4	3	0	1
Total D	15	6	29	40	6	20	31	30	43	25	26
E	0	27	0	0	13	0	0	0	0	0	3
F	8	0	9	0	0	0	5	4	0	4	3
Total %ages	100	100	100	100	100	100	100	100	100	100	100

they are part of the way the child views the world are not available at a conscious verbal level. However, they do affect the process leading to predicting and inferring.

Category E (retelling) accounted for 3% of the responses. Its use by members of Group 2 only is described later in the chapter.

Category F (failing to comprehend) also accounted for 3% of the responses. This category was used very little by any child. The low incidence of Category F may result from the choice of a story with a suitable readability level coupled with experiences (both personal and instructional) which provided a background of information for the reading of the story. As the analysis of unaided recalls indicates (analysis of Unaided Recalls is presented later in the chapter), accuracy of comprehension was generally not affected by failure to comprehend in protocol analysis.

These results indicate that the children in this study generally constructed a great deal of the meaning which they derived from the story. In other words, they used (1) the information in the story, (2) their purpose for reading and (3) their background knowledge to develop ideas related to the story rather than to simply recall the author's statements.

An examination of sub-categories within Category D provides further insight into the comprehension process. Table 3 indicates that Category D1 (predicting) account for 24% out of 26% of responses in Category D. This result shows that the children generally did not revise or confirm predictions orally. It appeared that their predictions were usually accurate so that revision or confirmation was often unnecessary.

This may have been due to the use of literary discourse (chosen because of its familiarity for most Grade 4 children) rather than informational, persuasive or self-expressive discourse.

CHARACTERISTICS OF GROUP 1 AND GROUP 2

On the basis of the findings in Tables 2 and 3, two major response patterns were identified. Response patterns of Subjects 1, 3, 4, 6, 7, 8, 9, 10 were identified as Group 1 and response patterns of Subjects 2 and 5 were identified as Group 2. The response patterns of these groups differed in the percentage use of: Category A (extending beyond given information); Category D (reducing alternatives for continued story action); and Category E (retelling). These differences are presented in a bar graph in Figure 2.

Use of Categories A and D

One base for grouping the responses was the proportional use of Category D (reducing alternatives for continued story action) as compared to Category A (inferring) by the two groups. Category D can be characterized as linear extension, i.e., the importance of plot for story development motivated the children to decide among alternatives which answer the question, "What will happen next?" Thus, the children constructed their own meaning within the confines of plausible continuing action in the story. Category A can be characterized as lateral extension. This process involved thinking beyond the information given in the story itself, i.e., filling out what the text provided, considering implications of characters' actions (often in relation to self) and searching for insight into character attitudes

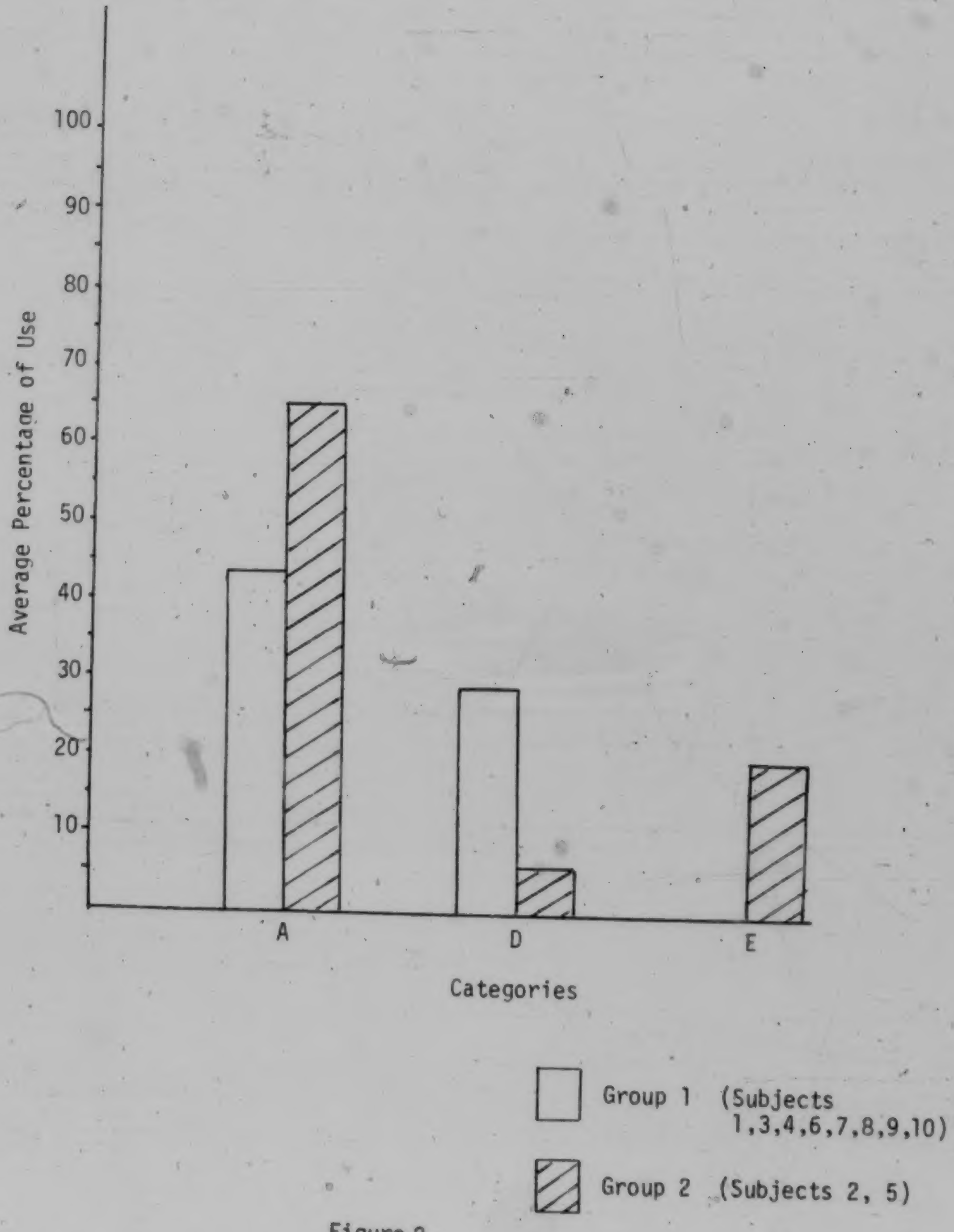

Figure 2

Response Trends of Group 1 Compared to Group 2 and emotions. Thus, the children constructed meaning beyond the confines of the story.

Category D responses (predicting, i.e., linear extension) were almost nonexistent in Group 2, in contrast to Group 1 who used the strategy 15% to 43% of the time. Therefore, Group 1 is referred to as Linear Group (1). Although Category A responses (inferring, i.e., lateral extension) were used extensively by both groups, percentage use of this strategy by each Group 2 member was higher than for any member in Linear Group (1). Therefore, Group 2 is referred to as Lateral Group (2). Thus, Lateral Group (2) appears to have responded more often to character traits and motives (lateral extension) than to the plot of the story (linear extension) whereas Linear Group (1) found both strategies useful.

Use of Category E

A second differentiating feature appeared to be the use of retelling (E) by Lateral Group (2) as opposed to Linear Group (1) who never used the strategy. This difference seems to be important when the nature of reading instruction is considered. Retelling is a "learning to read" strategy whereas the other strategies involve "reading to learn," i.e., reading with purpose. Children often enjoy retelling a story—a television episode, a movie, a book—to an appreciative audience. The purpose for this activity is sharing the information and reliving the story through the retelling. However, this purpose is not evident when a subject pauses at a juncture in the story and paraphrases or summarizes major action. The use of retelling in this situation could indicate accuracy of literal recall rather than a reaction to the information, i.e., an attempt by the child to personally reconstruct the author's message in a meaningful way. Since retelling in answer to factual questions is an expected skill in many reading classes, Lateral Group (2) may have assumed that retelling was an expected response for protocol analysis even though the teacher/researcher instructed each child to simply "tell what you are thinking."

Comparison of Response Patterns of One Typical Member from Each Group

Protocols from one typical member of each group were chosen because they exemplify the general trends identified for each group. Linear Group (1) was characterized by its frequent use of predicting as compared to Lateral Group (2) which seldom predicted but which used the strategy of inferring proportionally more often than any member of Linear Group (1). In addition, Lateral Group (2) used retelling, a strategy never used in isolation by Linear Group (1).

However, the striking feature of these protocols is each child's use of information from the same passage for different interpretation at most of the dots, i.e., imposed pauses. Each reader decided what information was important. The decision was personal, as unique as the individual who made it.

Dot	Linear Group (1) Number 10	Category	Lateral Group (2) Number 2	Category
1	I was thinking when he asked, his dad would say, "No," because he thought he could do it himself.	D1 C1	No response	--

Dot	Linear Group (1) Number 10	Category	Lateral Group (2) Number 2	Category
2	I was thinking that Almanzo (whatever his name is) would get tired from all of it, just standing there telling Bess to go and telling Bess to stop.	B3	Well, Almanzo's father must have been really strong because he could lift 250 pounds.	A1
3	I thought that when he was talking at the table, he was going to get some kind of punishment because he wasn't supposed to talk at the table.	B3	Almanzo must have liked riding on hay because it says um he shouted and shouted when his father let him ride on the hay the next morning.	B3
4	I think that when he found it he was happy and then when his dad found out that he had to give it all back he was pretty sad because you can buy quite a bit with all that.	A1 C2	He found someone's pocketbook and um he didn't know who it was and it had lots of money in it and they were trying to find the man who's afraid of banks 'cause it's got so much money in it— nobody would carry such money.	E
5	I think that, when he, when the man said that he was smart and his dad didn't take the money for the hay and let him—that Almanzo count it for himself— I think that it—I think that he would think himself real big and start blabbing it all over town and maybe losing some of his friends blabbing about all that.	A1 D1	Almanzo is very smart because they were going to take bales of hay for $2.00 so he told the liveryman $2.25 and he said he wouldn't pay a penny over $2.00. So if he had said $2.00 he probably would have gotten something about 75¢.	A1
6	I thought that when he was waiting in line there that he'd get so bored that he'd just yell out.	B3	They asked Mr. Thompson if he had lost his pocketbook.	E

Dot	Linear Group (1) Number 10	Category	Lateral Group (2) Number 2	Category
7	I thought when Mr. Thompson snatched it away he would run away with it without thanking Almanzo or anything.	D1	Um, he said he had lost his pocketbook and Almanzo gave it to him. It was his and he counted all the money over twice. And he had lots of relief and he said Almanzo didn't steal any of his money.	E
8	I thought that Almanzo was so mad that he would just hit Mr. Thompson so hard that he would start to bawl.	D1	Mr. Thompson gave Almanzo back a nickel for giving back his pocketbook.	E
9	I thought for a second that the man who came to Mr. Thompson would—and when he put his face under Mr. Thompson's nose would sock him there real hard.	D1	I think Mr. Thompson thinks Almanzo's a thief because Almanzo had the pocketbook—that he gave back to him.	A1
10	I think that Mr. Thompson—I thought that he wouldn't give the money because he was so happy to have it back.	D1	I don't think Almanzo had all that money in his hand before. I don't think he's seen all that money before.	A1
11	I think that um Almanzo would give the guy that kinda made Mr. Thompson give the money—you would think he would give some money to that guy for giving some money for him.	A2	I think Almanzo's father is rather kind because Almanzo thought his father wouldn't let him keep the money but he did—he got to keep it.	A2
12	I think he would be so happy he couldn't really answer his father and this—the man who asked him about what he was going to do with all that money.	A2 D1	No response.	

Dot	Linear Group (1) Number 10	Category	Lateral Group (2) Number 2	Category
13	I thought that he would really think himself proud that—putting his own money in the bank and having more money probably than all his friends put together—things like that.	A2 B2	No response.	
14	I think that when he was so tired and exhausted from everything—I think he would suddenly fall asleep or faint or something.	D1	I think they're gonna give Almanzo a job soon 'cause he has so much money.	D1
15	I think that his mom would get so mad that he'd—that his mom would throw a fit—she was so mad for some reason.	A1	No response.	
16	I think that after he put his money into the bank and everything by himself and then after his mother said he was too young and shouldn't go—wagon builder—that he would suddenly feel small and get all mixed up.	A2	I think Almanzo's mother doesn't want him to have a job and his father does want him to have a job.	A2
17	I think that when he was choking he would throw up or get real sick.	C1 A1	Almanzo's mother knew um that something was on. His father was asking him questions and he was answering them but she still didn't know what was going on.	A2
18	I think that when his dad told him both sides to this, he'd get all mixed up again.	A2	I think Almanzo's father is trying to make Almanzo take a job he doesn't want really.	A2

Dot	Linear Group (1) Number 10	Category	Lateral Group (2) Number 2	Category
19	I think that when his dad said, "Keep the money in the bank, then he was probably sad and his dad said, "I'll give you Starlight, then he'd probably be very happy."	A2	Um, I don't think Almanzo's father would like Almanzo to spend all his money just on a colt and they have one already. And Almanzo's father could get money for his colt and he could do what he wants with it, instead of wasting his money 'cause they already have one.	A2

SUMMARY OF FINDINGS OF PROTOCOL ANALYSIS

The proficient readers in this study constructed much of the meaning of the author's message rather than merely passively receiving the words on the page in a cognitively simple and uniform way.

1. They used the story information while they were reading in order to create predictions (linear extensions) and inferences (lateral extensions). Thus, Categories A, B and D accounted for 82% of the total responses. Category C (background experiences) was used as a rationale for linear and lateral extensions. Its inclusion would bring the total for creative responses to 94%.

2. Category E (retelling of story events as an isolated strategy) was never used by Linear Group (1). This was the only strategy that did not appear to serve any cognitive function in the protocol analysis situation. Lateral Group (2), which did restate

portions of the discourse, also made the highest percentage of inferences but fewer predictions. Thus, they responded more to the opportunities for lateral extension than for linear extension.

3. Each child restructured the same story information in a way that was personally meaningful. This was indicated by the diverse responses given by different children after reading the same information in the protocol analysis situation.

ANALYSIS OF UNAIDED RECALLS

Little information was gathered from the unaided recalls except that the children's literal comprehension of sequence of events was generally accurate. However, several children were unable to recall minor details, such as the wagon-builder's name and the store-owner's name. These results indicate that requesting a child to "retell the story as if you were telling it to a friend" implies an accurate statement of the plot. A sample unaided recall appears in Appendix E.

ANALYSIS OF RESPONSES TO PROBING QUESTIONS

Responses to Character Analysis Question

Generally, the responses to the character analysis question, "What was __________ like?" were necessarily of an inferential nature. Just as the statement, "Retell the story as if you were telling it to a friend" implies a literal sequential account, so the question, "What was __________ like?" implies an inferential response.

Responses were easily categorized according to the criteria for protocol analysis. As already stated, most responses were of an inferential nature and therefore categorized as Category A (extending beyond given information), Category B (relating story information to purpose for reading) with Category C (using background knowledge for comprehension) sometimes a factor in the response. Within these categories, there were no Category A3 responses (asking a question) or Category B1 responses (identification with a pioneer character).

There were a few responses that indicated failure to comprehend (Category F). (This had not been apparent in the unaided recalls.) In one instance, a child used retelling (Category E) as an isolated strategy. Because reducing alternatives for continued story action operates within the story reading situation, no Category D responses were observed.

Examples of responses which illustrate the use of inferential and other strategies are presented below. (Each of the following examples was a response to the question "What was ______ (name of character) like?")

Category A: Extending beyond given story information

A1 Factual speculation regarding story information other than pioneer life.

> He [Father] smiled but he never laughed 'cause all he did was have a twinkle in his eyes! He had a funny—a funny twinkle.

A2 Inferring.

> Well, she [Mother] wasn't calm, that's for sure 'cause she was kind of maybe nervous sometimes. And she was very busy too. And she didn't want her sons to leave because she loved them very much.

Category B: Relating story information to purpose for reading.

B2 Identification with situation.

Well, he [Almanzo] was just like his father. He handled things really well. Except Mr. Thompson. That's one thing he didn't handle very well. He felt like hitting him. O boy! Would that ever be fun! Whack!

B3 Factual speculation concerning information about pioneer life.

It sounded like he [Mr. Paddock] ran a pretty good business because all the peop—just about every person came in and well maybe that's because that was the only store in town.

Category C: Relating background experiences to story information for comprehension.

C1 Using personal experiences.

A2 |He [Mr. Thompson] was greedy. He was selfish just like that man that was on—you know, Cratchet and Mr. — that man that always said, "Humbug!"

C2 Using instructional experiences.

A2 |She [Mother] had to be patient. Like, if it was winter, well, um, they'd have just dried fruits maybe and if, well, she'd have to soak them. She'd have, well, she—like if dinner's ready or something and the men weren't back from town or something, she'd have to be patient for them to get back and not be mad or something. And well, she'd have to be quite, well, she wouldn't have to worry, well, if the wagon was not too good. Then she would have—then if it broke down or something on the way—a thunderstorm or a deep snow or something, then she'd have to be calm in case her husband got trapped or something . . .

Category E: Retelling

He [Almanzo] was a boy who lived on a farm. He liked colts and he wanted to break them. He had fun around

> the farm. He didn't especially like school. That's about all I can remember about him.

Category F: Failing to comprehend.

> I don't know if it was Mr. Padlock or if it was Father because they said it would be very busy because there was no —. I didn't understand. I didn't understand if there was no railroad or if there was one. But I thought it was no railroad so that it would be busy so that lots of people would want um the wagons to ride and buggies and stuff because they needed to go to town—to get to their place wherever they were going.

The children's use of strategies to answer the character analysis questions which they had used while reading (i.e., in protocol analysis) adds support to a major tenet of Chapter 2: "Reading/thinking continues after the book is closed" (Goodman and Watson, 1972, p. 826).

Responses to Plot Questions

Following the character analysis questions, a question concerning plot was asked: "What was the problem the story was trying to solve?" The children identified three problems, which were subsequently categorized as G, H and I.

Category G: Would Almanzo choose to be an apprentice or a farmer?

Category H: Would Almanzo find Mr. Thompson and give the money back?

Category I: Should a problem be solved by fighting?

The categories of responses given by each child are recorded in Table 4.

Table 4

Response Categorization for Each Child to Plot Question

	Child										
Category	1	2	3	4	5	6	7	8	9	10	Total
G	*	*		†	*	*	†		†		7
H		*	*			*		*			4
I			†	†					†		3
Total	1	2	2	2	1	2	1	1	2	0	14

* - literal statement
† - inferential statement

Table 4 indicates that the children generally identified at least one of the problems the story was trying to solve. Seven children stated the key issue from the chapter, "Farmer Boy" (Category G). Four children identified the central element of the plot from the chapter, "The Pocketbook" (Category H). Of these children, two identified both elements.

> e.g. Well, in one part, they were trying to give Mr. Thompson back his pocketbook—trying to find out who the pocketbook belonged to and they found out. In another part of the story, they were wondering what Almanzo would do.

In addition, three children also reacted to the fist fight proposed by Mr. Paddock (Category I). The impact of this story situation was heightened by a graphic illustration. The argument between Father and Mother over Almanzo's apprenticeship was another factor that the children considered in relation to fighting (also Category I).

> e.g. Everybody started to fight just because Almanzo got $200. It started a lot of fights . . . Almanzo's Mom and Dad had a fight when Almanzo had the money . . . the problem was that everyone was fighting because Almanzo had gotten $200.

One child did not respond.

The children generally interpreted that the question required a literal statement of plot. However, several children reconstructed the plot information in different ways as indicated by the following two examples of Category G.

> e.g. People . . . should come right out with what they want . . . they should at least mention it, you know. "I like colts, I wish I had one" . . . if they don't say, they're not on their way to getting it.

> e.g. To always think things over before you go along with something.

Responses to Theme Question

Finally, a question concerning the theme of the story was asked, "What do you think the story was trying to tell you?" The children identified four themes, which were subsequently categorized as J, K, L and M.

Category J:	Purpose for reading.
Category K:	Values demonstrated in the story.
Category L:	Identification with personal relationships expressed in the story.
Category M:	The plot of the story.

The category of response given by each child is recorded in Table 5.

Table 5 indicates that four children related their personal meaning for the story to their purpose for reading (Category J).

e.g. Well, I think it told me about how rough it was in pioneer days and that it's—it's just kind of hard to leave home sometimes to work and raise a family. So I think it's trying to tell me about pioneer days.

Four other children expressed the theme in terms of one of the values demonstrated in the story (Category K). These included the virtues of honesty, politeness, thriftiness, asserting oneself and the destructive force of greed which results in fighting.

e.g. Stand up for what you want to be even if someone wants you to be something else—what you want to be.

One child expressed the theme in terms of his identification with personal relationships expressed in the story (Category L).

e.g. That if you're ever going to be an apprentice wagon or car maker, don't tell your mother!

Finally, one child stated the essential element of the plot (Category M).

e.g. About Almanzo, I think. Mostly about Almanzo wanting a colt.

Table 5

Response Categorization for Each Child to Theme Question

	Child										
Category	1	2	3	4	5	6	7	8	9	10	Total
J	†					†	†	†			4
K		†	†	†						†	4
L									†		1
M					★						1
Total	1	1	1	1	1	1	1	1	1	1	10

★ - literal statement
† - inferential statement

Perhaps the most important point to note, however, is that these 10 proficient readers produced 10 different statements of theme. (The four children who related pioneer life to their purpose for reading focused on different elements of pioneer life.) As stated in the theoretical framework, what one takes from a reading experience is determined, to a large extent, by what one brings to that experience. Thus, the personalized output that was observed appears to have reflected each child's endeavor to make sense of the new information in relation to what he already knew about language and the world. In other words, the personalized output resulted from personalized input.

SUMMARY OF FINDINGS OF UNAIDED RECALLS AND PROBING QUESTIONS

1. The unaided recalls provided information on the accuracy of literal sequential recall. The literal responses were predetermined by the type of question. These proficient readers were generally accurate in their recall of story information.

2. To answer the character analysis question, the children used strategies they had previously used in protocol analysis, particularly inferring. However, a major reason for the frequent use of inferential responses was thought to be the inferential nature of the question.

3. The children identified three major problems the story was trying to solve. Most often, their statements were confined to story elements although several children generalized their interpretation of story elements to real world situations.

4. In response to the theme question, most of the children

expressed a personal meaning in relation to their purpose for reading or a universal value. The outstanding finding was that each child constructed a slightly different personal meaning.

RELATIONSHIP OF FINDINGS TO RESEARCH QUESTION 1

Research Question 1:

> What comprehension strategies do proficient readers in this study use when reading a story which they encounter within an environment designed to be conducive to the comprehension process?

Information to answer this question was gathered from protocol analysis, unaided recall and probing questions. The main source of information was protocol analysis. Through the use of probing questions, some information was gained even though it appeared that the cognitive level of the probing questions predetermined, to a large extent, the level of responses. However, little information was gathered in unaided recall because the task required a literal sequential statement of story events.

Six categories of comprehension strategies were identified in the responses to protocol analysis. These categories included:

A: extending beyond given information (subsequently referred to as lateral extension);

B: relating story information to purpose for reading;

C: using background knowledge for comprehension;

D: reducing alternatives for continued story action (subsequently referred to as linear extension);

E: retelling;

F: failing to comprehend.

The predominant use of extending strategies (A and D) with the related strategies (B and C) indicated that these proficient readers constructed meaning rather than merely focusing on the factual information provided in the story (E and F).

Within this major finding, two response pattern types were observed and identified as Linear Group (1) and Lateral Group (2). Linear Group (1) responded proportionally more often to the plot of the story, i.e., predicting what would happen next, whereas Lateral Group (2) responded proportionally more often to the implications of character attitudes and emotions, i.e., filling out what the text provided. In addition, Lateral Group (2) retold portions of discourse whereas Linear Group (1) never used this strategy in isolation. The significance of these findings in relation to Research Question 1 needs to be further investigated.

In response to the character analysis question, the children used all categories identified in protocol analysis except Category D (reducing alternatives for continued story action) which operates within the confines of the story. The use of most of the strategies they had used during protocol analysis to answer the character analysis questions appeared to support Goodman and Burke's statement that "reading/thinking continues after the book is closed."

An outstanding characteristic of responses to protocol analysis and probing questions was that each child constructed his own interpretation from the same story information to create responses that were personally his in many respects.

RELATIONSHIP OF FINDINGS TO RESEARCH QUESTION 2

Research Question 2:

> In what ways does the instructional environment influence the comprehension strategies used by the subjects in the study?

It appeared that the teacher-planned experiences had little bearing on the strategies used in protocol analysis as the children used instructional experiences for comprehension only 5% of the time. This finding may be related to the use of literary discourse as opposed to informational discourse for protocol analysis. The background experiences provided at Fort Edmonton and 1885 Street, and at the learning centers (Chapter III) involved factual information which the children may have related more easily to informational discourse than to the story format of the chapters from Farmer Boy.

Through the use of instructional experiences, the teacher/researcher planned that the children would develop a meaningful purpose for reading the story from Farmer Boy. The children related story information to purpose for reading 11% of the time in protocol analysis. However, the elaborate teacher preparations did not seem to be a major factor in the development of the children's interest in the central question, "What would life be like for me if I were a pioneer child in Alberta?" As suggested in Instructional Outcomes (Chapter III), the plan became purposeful as the children actively involved themselves in answering the central question. Contriving the unit before the children were introduced to it appeared to limit several possibilities for their active involvement in searching for information. Possibilities for adapting the teacher's role are discussed in Chapter V.

REVIEW OF CHAPTER IV AND OVERVIEW OF CHAPTER V

This chapter has provided an analysis of findings in relation to the two research questions posed in Chapter I. Responses to protocol analysis were categorized and discussed. Findings of unaided recalls and probing questions were also discussed. Finally, the findings were evaluated in terms of the research questions.

Chapter V presents the implications of the findings for the theoretical framework, for instruction and the instructional environment and for further research.

CHAPTER V

IMPLICATIONS FOR THEORY, INSTRUCTION AND RESEARCH

In Chapter V, implications are drawn for the theoretical framework, for instruction, the instructional environment, and further research in relation to the findings in this study. The chapter begins with two proposals for modifying the theoretical framework. Second, two implications for instruction in reading are discussed. Third, an implication for the teacher's role in developing the instructional environment is examined. Fourth, a major implication for research in education is proposed. Finally, possibilities for related studies are suggested.

IMPLICATIONS FOR THE THEORETICAL FRAMEWORK

The model of the comprehension process described in Chapter II appears to account for most of the comprehension strategies used. by proficient readers in this study. The children used their purpose for reading, background experiences and information in the story to construct meaning. The comprehension model, first presented in Chapter I, is presented again (Figure 1). However, this model does not account for two aspects of the comprehension process observed in the study.

First, the study showed that the proficient readers constructed meaning not only by thinking ahead as they read the story (linear extension or predicting) but by thinking beyond the story as they

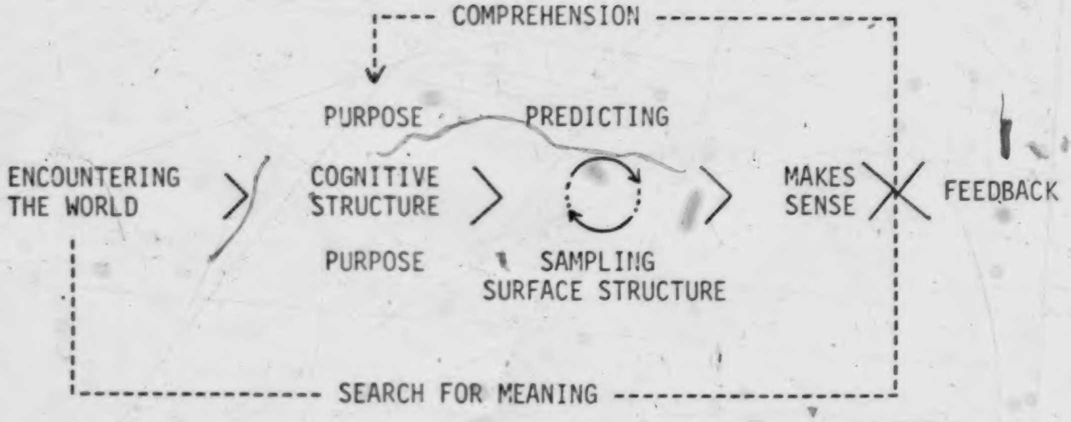

Figure 1

Reading Comprehension
(C. Olson)

read (lateral extension or inferring). Figure 1 shows that readers constructed and revised predictions as they sampled the surface structure. The findings of this study indicated that the proficient readers also constructed inferences as they sampled the surface structure. Thus, lateral extension was an integral part of the comprehension process for these proficient readers.

Second, the implications for instruction which developed from the theoretical framework indicated that the teacher could design the instructional environment so that children could use the elements of the comprehension process in a sequential way. (Refer to Figure 1.) However, regardless of the teacher's focus on a particular element of the process at any given time, each child used the available information in his own way. Whether the information provided background experiences and/or a purpose for reading and/or feedback depended on how the child used it. For example, the initial experiences seemed to provide feedback for some and the final (feedback) procedure, a purpose for further reading for some. In the same way, Mrs. Stainton's talk appeared to be the first meaningful encounter for others.

Figure 3 presents a revised model of the comprehension process. This model accounts for lateral extension as an integral part of the comprehension process (see Figure 3—Linear and Lateral Extensions). It also indicates that the child determines whether to use instructional experiences as the teacher intended (see Figure 3—Personal Search for Meaning).

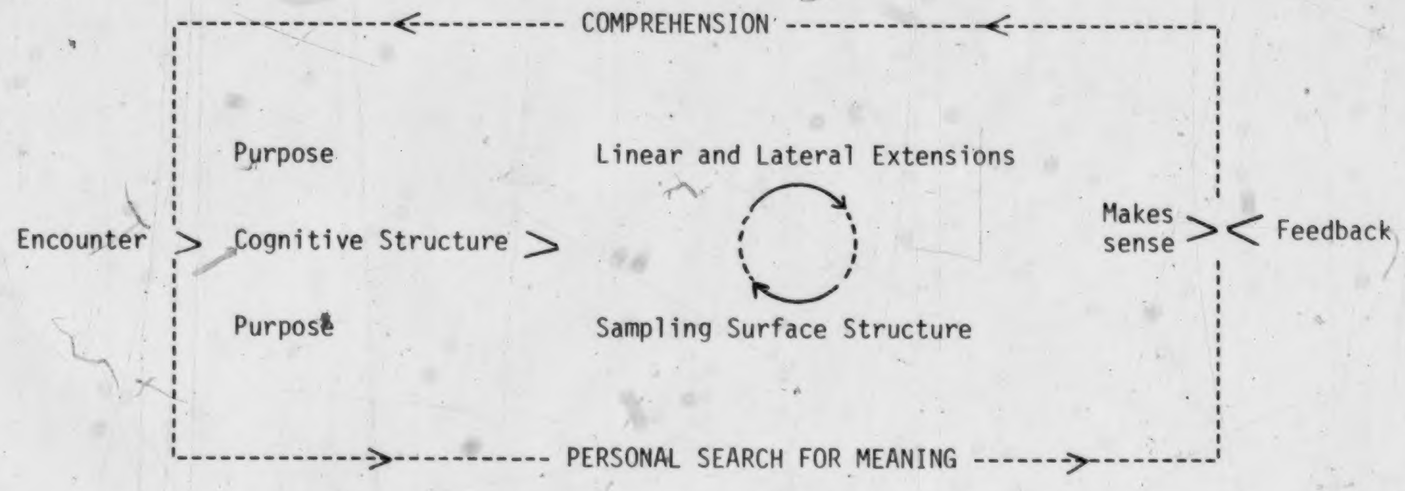
COMPREHENSION
Purpose
Linear and Lateral Extensions
Encounter
Cognitive Structure
Makes sense
Feedback
Purpose
Sampling Surface Structure
PERSONAL SEARCH FOR MEANING

Figure 3

Reading Comprehension (Revised)
(C. Olson)

IMPLICATIONS FOR INSTRUCTION

Implications for instruction developed from an analysis of responses in protocol analysis, unaided recalls and probing questions. These were feedback procedures and therefore, the implications for instruction relate to the feedback part of the comprehension model. First, a questioning procedure commonly used in reading series is examined. Second, feedback procedures other than questioning are discussed.

Critique of a Questioning Procedure

Because reading is a personalized search for meaning, it is impossible for the authors of a reading series to anticipate the "correct" answer to an inferential question. However, the correct answer is often provided in the teacher's manual. The following example is taken from Ginn Reading 360 (Teachers' Edition, 1972, p. 140). The teacher is instructed to read the poem, "Pencil Magic" (see Appendix F for "Pencil Magic") and ask the question, "What else besides a pencil and paper does a person need to draw all the things that are mentioned?" The given answer is "Imagination." A child who considers answers such as talent or time or the teacher's permission is at least partially wrong because he does not supply the answer that the authors of the series are looking for. This restrictive and untrusting attitude towards the child's active and spontaneous involvement in inferential cognition directly opposes current information concerning the nature of the comprehension process. The opportunities for using past experiences and sharing knowledge may be hindered by the teacher's expectation of a particular answer. A more open approach would encourage each child to learn from others; to receive feedback on the effectiveness of his comprehension; and to expand his experience base.

Alternative Procedures for Receiving Feedback

One reason teachers ask questions is to receive feedback for evaluation on the effectiveness of a child's comprehension. In Chapter III, alternatives to asking questions were explored. Two feedback procedures were employed at the end of the instructional plan. First, the children discussed which era (pioneer or present) they would prefer to live in. Subsequently, they wrote and produced the play "The Life of Pioneer Children." It was evident during planning and practice sessions that the children considered staging, costumes, props, role types, action and dialogue in terms of knowledge gained during the instructional plan and that this functional use refined and developed that knowledge. They also used other sources of knowledge, such as how to write a play. Informal and formal feedback would also be possible through the use of projects related to a particular area of class study or individual interest which a child would choose to do, and then present (Spache, 1976).

These ideas for feedback complement the nature of the comprehension process because they provide for the child's involvement in choosing a project that is of interest to him, i.e., related to what he knows and wants to find out. Also, the presentation (or performance) provides a linguistic and social purpose for sustained involvement.

Each child benefits from the knowledge which the others share. The teacher benefits, too, because she receives input (e.g., for evaluation) from each individual in the class. In short, such feedback procedures can allow the child to structure his own learning to a much greater extent than is otherwise possible. Because individual participation is enhanced, evaluation of the child's learning could be more profitable for both teacher and child than many questioning procedures.

IMPLICATIONS FOR THE INSTRUCTIONAL ENVIRONMENT

There were two major findings that indicated teachers should adopt a responding role much more frequently as compared to their traditional role as the structurer of learning experiences. First, the overwhelming use of linear and lateral extension strategies in protocol analysis indicated that constructing meaning when reading was natural for proficient readers in this study, i.e., they used the higher levels of cognition in the absence of questions to direct their thinking. Second, the teacher/researcher tried to structure an instructional experience to complement the nature of the comprehension process but each child appeared to use the information in his own way.

In a responding role, the teacher would serve as a resource person who is aware of the various experiences and materials that are available. She would provide opportunities for active involvement on the part of the children by responding to questions, ideas and concerns, i.e., by listening and reacting to the children much more. To clarify the difference in role expectations for the teacher and children, an example of a teacher-directed model of interaction is presented in Table 6 and a child-centered model in Table 7. Each table is followed by a critique based on the nature of the comprehension process.

Table 6

A Teacher-Directed Reading Experience

Condensed from the Teachers' Edition of With Skies and Wings (Ginn Reading 360, Level 9, 1972, pp. 131-137). (See Appendix G for a synopsis of the story, "Grandpa's Farm" by James Flora.)

"Grandpa's Farm"

TEACHER'S ROLE	CHILDREN'S ROLE
Introduce the new words by writing them on the chalkboard	
Direct children to:	Check the meaning of the above words in the glossary.
Remind children the unit is called "A Feast of Fun"	
Direct children to:	Find the title of the story and name of the author in the Table of Contents.
Ask what could happen on a farm that would be funny.	
	Respond to question.
Tell children "Grandpa's Farm" is called a tall tale.	
Direct children to:	Decide what is "tall" about it.
Say, "The picture on page 95 shows a fine barn on Grandpa's farm."	
Direct children to:	Read pages 94 to 99 to learn how Grandpa happened to have such a handsome building.

Table 6 (continued)

TEACHER'S ROLE	CHILDREN'S ROLE
Ask the following questions after the children finish reading: What did you think of Grandpa's story? Which part did you think was funniest? What did Grandpa mean by the Big Wind of '34?	
	Respond to questions.
Direct children to:	Read pages 100 to 103. Read to see how Grandma's cow salve helped the farm.
Ask the following questions after the children finish reading: Which parts of the section did you think were humorous? Do you think any part of the story might be true? Which parts? Why?	
	Respond to questions.
Remind children they were to think about a tall tale as they read the story.	
Ask if the found anything "tall" in Grandpa's farm.	
	Children respond.
If children mention physical tallness only, draw out exaggerated incidents, list them on the chalkboard.	
Direct children to:	Describe Grandpa's mood when he was telling the story. They "should realize that Grandpa was apparently serious when he told his tale."

Table 6 (continued)

TEACHER'S ROLE	CHILDREN'S ROLE
Example of a suitable definition: "a story that is funny because of exaggerated happenings and one that is told in a serious manner"	Develop a simple definition of a tall tale.
	Reread the story in order to paint pictures of the events in the story.
	Present the finished pictures with an oral reading of the story to an audience.
Direct chidren to:	Write a tall tale as a group. Children dictate.
Write sentences on chalkboard.	
Direct children to:	Try to keep the tale brief. Try to end the story with a good sentence. Read the story aloud. Make any minor changes.
Provide opportunities for children to read other tall tales.	

Note: Workbook and worksheet exercises have been omitted in this table.

In Table 6, the focus is on the teacher's role. She states a purpose for reading, guides the reading, asks the questions, gives the assignments. There appear to be several problems with this instructional procedure when the nature of the comprehension process is considered.

1. Background experience. The Teachers' Edition assumes

that the children have not had any experiences with tall tales. Children are not given the opportunity to share experiences with "fish stories," or exaggerations, or other tall tales they have read.

2. Purpose for reading. The teacher sets the overall purpose for reading and the purpose for reading each part of the story. In each case, the children are to read to find a literal detail. The authors of this lesson have obviously interpreted "purpose" as an instructional reason for reading: they instruct the children what to think about while they are reading. The nature of the comprehension process, on the other hand, implies that the children must perceive a meaningful purpose for reading. Thus, they actively construct meaning which is necessarily unique in some respects because of the differing nature of each individual's cognitive structure. Telling children what to think about while they read could limit the range of comprehension strategies which they employ.

3. Development of concepts. Following the reading experience, the children are instructed to define "tall tale." This study found that the meaning which the proficient readers constructed was first personalized, then generalized. A definition (which is abstract) develops as the culmination of one's personal encounters with a phenomenon (which is concrete). This isolated contact with a tall tale would not provide sufficient evidence for the development of a generalization regarding the common characteristics of tall tales.

4. Feedback. The teacher assigns projects. These are useful activities for receiving feedback but generally, the children would be more actively involved if they were given the opportunity to suggest

alternatives of interest to them. A sharing time would be more meaningful if groups of children had different projects to share.

Table 7

A Child-Centered Reading Experience

Excerpt transcribed from a videotape of M. Trimm interacting with her Grade 1 class (1978).

"Airplane Research"

Two boys had prepared a chart with pictures and written explanations concerning the history of aviation. The following is an outline of their class presentation.

TEACHER'S ROLE	CHILDREN'S ROLE
	This is our airplane research. (reading) First men thought they could fly with wings but it did not work well. (Shows drawing of a man jumping off a cliff, his parents watching in horror.) He explains "He died."
	(reading) Next they built planes that did not fly well. Explains that planes were too heavy.
Teacher clarifies. Planes were not designed well. Explains.	
	(reading) Two brothers called Orville and Wilbur Wright built planes that could fly. (Show drawing of a bi-plane.)
Asks, How many wheels does a bicycle have? Tricycle? If you hear bi or tri in front of a word, what do you know?	
	Several children respond.
	(reading) Men wanted to fly like birds so they built planes without motors. (Show drawing of a glider.)

Table 7 (continued)

TEACHER'S ROLE	CHILDREN'S ROLE
	Explains, I've been in one. It's very scary, you think it's crashing.
	(reading) Men wanted to fly fast so they built jets. (Show drawing of a jet.) Explains. I've been in a jet, it's very nice, comfortable.
	Shows resource book for the report. Explains, This book was quite handy.
Asks "Why?"	
	Shows sources of drawings and information.
Asks "Is it fiction or non-fiction?"	
	Children unsure.
Teacher explains.	
Comments "You've done an excellent job explaining your information and where it comes from."	

In Table 7, the children have structured their own learning experiences to a large extent. The teacher assumes a responding role much more frequently. She listens to the children and adds her contributions to the discussion. The questions she asks are designed to help clarify, develop or expand ideas which the children have presented.

1. Background experiences. The children spontaneously incorporated their background experiences during the sharing time. Perhaps, these experiences helped motivate and sustain interest as

the project progressed.

2. Purposes for reading. The most obvious purpose for reading was to gain factual information concerning the history of aviation. The researchers were further motivated by the requirement of accuracy in reporting because they were introducing the information to the other children in the class. The "sharing time" therefore provided a real-life purpose for reading.

3. Development of concepts. The teacher and children shared their knowledge. The teacher built on the information provided by the children so that concepts were developed in a meaningful way.

4. Feedback. The sharing time experience provided feedback for the teacher and reporters on the effectiveness of reading comprehension in an informal way. Following most of the presentati[illegible], the audience (classmates) also had an opportunity to evaluate the proceedings and ask questions. As "Airplane Research" was one of the latter presentations on the videotape, "Sharing Time," perhaps there was insufficient time for audience reactions. However, audience reactions are an important source of feedback.

The outstanding difference between Table 6 and Table 7 is the nature of the teacher's role and therefore, the instructional environment. In Table 6, the children depend on the teacher to identify their roles: they respond to her directions, questions and assignments. In Table 7, the teacher depends on the children to identify her roles: she responds to their interests and the information they provide.

IMPLICATIONS FOR FURTHER RESEARCH

Longitudinal Ethnographic Research

As the research progressed, a major implication for further research became evident. Longitudinal ethnographic research, i.e., research conducted in a classroom over a substantial period of time which tries to study the factors which affect a product or process, may be necessary to gain further insight into the nature of the comprehension process.

In this study, the use of protocol analyses and probing questions provided insight concerning the strategies which the proficient readers used to comprehend a story. However, protocol analysis did appear to affect the continuity of the process. A more natural way of obtaining information concerning the comprehension process would be to observe how children consistently use information from their reading over a period of time. The use of typical classroom feedback procedures for research would also provide practical information for teachers.

An instructional plan was an integral part of this study. However, the teacher/researcher used another teacher's classroom to carry out the two week plan which was isolated from other classroom studies. Observing children in their natural setting is important because the comprehension process of each child operates within that setting. The events of the entire school day require the child to make sense of new experiences in relation to his cognitive structure. Reading in a functional language framework is one way that the child can make sense of his experiences. Trying to study reading outside of this natural setting, particularly trying to "control" or eliminate factors that affect it, could seriously jeopardize the validity of the data that are collected and the conclusions that are drawn.

One example of longitudinal ethnographic research is a current study by Graves (1979). He is involved in a two year study which investigates how children change when they write.

> The study will follow eight children from grade one through grade two, and eight children from grade three through grade four in five different classrooms. Since the case study method will be used, readers [of the study] can expect detailed observations when children write, play or compose in any area that might affect what a child does in the writing process. (p. 77)

The purpose of the study is to provide teachers with information concerning "the process of writing and how young writers develop" (p. 77) in order that they might "'read out' from child behaviors to teaching action, rather than infusing methods into the teaching of writing whether the child is ready or not" (p. 78). Thus, there may be a logical and necessary relationship between child-centered research and child-centered instruction.

Implications for Related Research

Related research should focus on how the child structures meaning as he reads. There are many plans for research within the longitudinal ethnographic model which would accommodate this focus.

1. The study of the comprehension strategies which develop among students in various classroom environments, such as those contrasted in Tables 7 and 8, could prove important.

2. A study similar to that planned by Graves (1979) could

examine the developmental aspect of children's use of comprehension strategies.

3. Strategies used by children of differing abilities (e.g., proficient and non-proficient readers, low and high IQs, etc.) could be compared.

4. Strategies used by children to read different kinds of discourse (e.g., informative, persuasive, narrative, etc.) could be examined.

CONCLUDING STATEMENT

This study has revealed more fully to the researcher the complexity of the comprehension process. The most important finding was that the children confronted new experiences in a personal way and took from those experiences what was relevant to them. In relation to this finding, factual information, background experiences and purposes for reading appeared to be used as spring-boards for higher level cognition, i.e., linear and lateral extensions. Thus, the children actively constructed meaning. Therefore, it appears that a teacher cannot instill knowledge. But she can initiate interest, provide guidance and resources, and respond to the children's questions and concerns. In this way, the tenets of the comprehension process, reading as a functional use of language related to what the child knows, can be implemented in the classroom.

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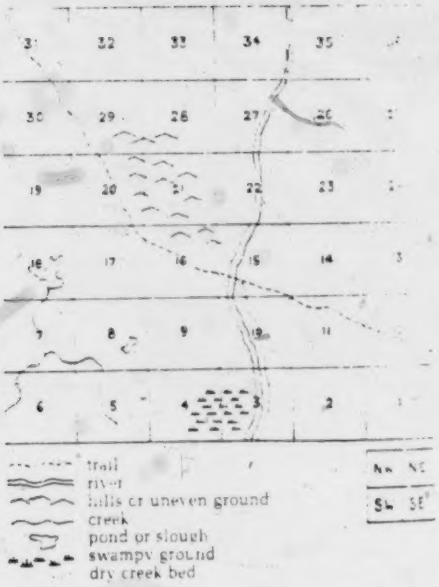
APPENDICES

APPENDIX A

TOWNSHIP*



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*Rosemary Meering, Settlement of the West (Growth of a Nation Series). Fitzhenry and Whiteside, 1974, p. 18.

APPENDIX B

CHAPTER 5*

BIRTHDAY

Next morning while Almanzo was eating his oatmeal, p. 49
Father said this was his birthday. Almanzo had forgotten it. He was nine years old, that cold winter morning.

"There's something for you in the woodshed," Father said.

Almanzo wanted to see it right away. But Mother said if he did not eat his breakfast he was sick, and must take medicine. Then he ate as fast as he could, and she said:

"Don't take such big mouthfuls."

Mothers always fuss about the way you eat. You can p. 50
hardly eat any way that pleases them.

But at last breakfast was over and Almanzo got to the woodshed. There was a little calf-yoke! Father had made it (1)
of red cedar, so it was strong and yet light. It was Almanzo's very own, and Father said,

"Yes, son, you are old enough now to break the calves."

Almanzo did not go to school that day. He did not have to go to school when there were more important things to do. He carried the little yoke to the barn, and Father went with him. Almanzo thought that if he handled the calves perfectly, perhaps Father might let him help with the colts next year.

Star and Bright were in their warm stall in the South Barn. Their little red sides were sleek and silky from all the curryings Almanzo had given them. They crowded against him when he went into the stall, and licked at him with their wet, rough tongues. They thought he had brought them carrots. They did not know he was going to teach them how to behave like big p. 51
oxen.

Father showed him how to fit the yoke carefully to their soft necks. He must scrape its inside curves with a bit of broken glass, till the yoke fitted perfectly and the wood was silky-smooth. Then Almanzo let down the bars of the stall, and the wondering calves followed him into the dazzling, cold, snowy barnyard.

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*Laura Ingalls Wilder, Farmer Boy (New York: Harper, 1933), pp. 49-64.

Father held up one end of the yoke while Almanzo laid the other end on Bright's neck. Then Almanzo lifted up the bow under Bright's throat and pushed its ends through the holes made for them in the yoke. He slipped a wooden bow-pin through one end of the bow, above the yoke, and it held the bow in place.

Bright kept twisting his head and trying to see the strange thing on his neck. But Almanzo had made him so gentle that he stood quietly, and Almanzo gave him a piece of carrot.

Star heard him crunching it and came to get his share. Father pushed him around beside Bright, under the other end of the yoke, and Almanzo pushed the other bow up under his throat and fastened it with its bow-pin. There, already, he had his little yoke of oxen. p. 52 (2)

Then Father tied a rope around Star's nubs of horns and Almanzo took the rope. He stood in front of the calves and shouted,

"Giddap!"

Star's neck stretched out longer and longer. Almanzo pulled, till finally Star stepped forward. Bright snorted and pulled back. The yoke twisted Star's head around and stopped him, and the two calves stood wondering what it was all about. p. 53

Father helped Almanzo push them, till they stood properly side by side again. Then he said,

"Well, son, I'll leave you to figure it out." And he went into the barn. (3)

Then Almanzo knew that he was really old enough to do important things all by himself.

He stood in the snow and looked at the calves, and they stared innocently at him. He wondered how to teach them what "Giddap!" meant. There wasn't any way to tell them. But he must find some way to tell them,

"When I say, 'Giddap!' you must walk straight ahead."

Almanzo thought awhile, and then he left the calves and went to the cows' feed-box, and filled his pockets with carrots. He came back and stood as far in front of the calves as he could, holding the rope in his left hand. He put his right hand into the pocket of his barn jumper. Then he shouted, "Giddap!" and he showed Star and Bright a carrot in his hand. p. 54

They came eagerly.

"Whoa!" Almanzo shouted when they reached him, and they stopped for the carrot. He gave each of them a piece, and when they had eaten it he backed away again, and putting his hand in his pocket he shouted:

"Giddap!"

It was astonishing how quickly they learned that "Giddap!" meant to start forward, and "Whoa!" meant to stop. They were behaving as well as grown-up oxen when Father came to the barn door and said:

"That's enough, son."

Almanzo did not think it was enough, but of course he could not contradict Father. • (4)

"Calves will get sullen and stop minding you if you work them too long at first," Father said. "Besides, it's dinner-time."

Almanzo could hardly believe it. The whole morning had gone in a minute.

He took out the bow-pins, let the bows down, and lifted the yoke off the calves' necks. He put Star and Bright in their warm stall. Then Father showed him how to wipe the bows and yoke with wisps of clean hay, and hang them on their pegs. He must always clean them and keep them dry, or the calves would have sore necks. • p. 55 (5)

In the Horse Barn he stopped just a minute to look at the colts. He liked Star and Bright, but calves were clumsy and awkward compared with the slender, fine, quick colts. Their nostrils fluttered when they breathed, their ears moved as swiftly as birds. They tossed their heads with a flutter of manes, and daintily pawed with their slender legs and little hoofs, and their eyes were full of spirit.

"I'd like to help break a colt," Almanzo ventured to say.

"It's a man's job, son," Father said. "One little mistake'll ruin a fine colt."

Almanzo did not say any more. He went soberly into the house. • (6)

It was strange to be eating all alone with Father and Mother. They ate at the table in the kitchen, because there was no company today. The kitchen was bright with the glitter of snow outside. The floor and the tables were scrubbed bone white with lye and sand. The tin saucepans glittered silver, p. 56

and the copper pots gleamed gold on the walls, the teakettle hummed, and the geraniums on the window-sill were redder than Mother's red dress.

Almanzo was very hungry. He ate in silence, busily filling the big emptiness inside him, while Father and Mother talked. When they finished eating, Mother jumped up and began putting the dishes into the dishpan.

"You fill the wood-box, Almanzo," she said. "And then there's other things you can do." • (7)

Almanzo opened the woodshed door by the stove. There, right before him, was a new hand-sled!

He could hardly believe it was for him. The calf-yoke was his birthday present. He asked:

"Whose sled is that, Father? Is it—it isn't for me?"

Mother laughed and Father twinkled his eyes and asked, "Do you know any other nine-year-old that wants it?" p. 57

It was a beautiful sled. Father had made it of hickory. It was long and slim and swift-looking; the hickory runners had been soaked and bent into long, clean curves that seemed ready to fly. Almanzo stroked the shiny-smooth wood. It was polished so perfectly that he could not feel even the tops of the wooden pegs that held it together. There was a bar between the runners, for his feet.

"Get along with you!" Mother said, laughing. "Take that sled outdoors where it belongs." • (8)

The cold stood steadily at forty below zero, but the sun was shining, and all afternoon Almanzo played with his sled. Of course it would not slide in the soft, deep snow, but in the road the bobsleds' runners had made two sleek, hard tracks. At the top of the hill Almanzo started the sled and flung himself on it, and away he went.

Only the track was curving and narrow, so sooner or later he spilled into the drifts. End over end went the flying sled, and headlong went Almanzo. But he floundered out, and climbed the hill again. p. 58

Several times he went into the house for apples and doughnuts and cookies. Downstairs was still warm and empty. Upstairs there was the thud-thud of Mother's loom and the clickety-clack of the flying shuttle. Almanzo opened the woodshed door and heard the slithery, soft sound of a shaving-knife, and the flap of a turned shingle. • (9)

He climbed the stairs to Father's attic workroom. His snowy mittens hung by their string around his neck; in his right hand he held a doughnut and in his left hand two cookies. He took a bite of doughnut and then a bite of cooky.

Father sat astraddle on the end of the shaving-bench, by the window. The bench slanted upward toward him, and at the top of the slant two pegs stood up. At his right hand was a pile of rough shingles which he had split with his ax from short lengths of oak logs.

He picked up a shingle, laid its end against the pegs, and then drew the shaving-knife up its side. One stroke smoothed it, another stroke shaved the upper end thinner than the lower end. Father flipped the shingle over. Two strokes on that side, and it was done. Father laid it on the pile of finished shingles, and set another rough one against the pegs. p. 59

His hands moved smoothly and quickly. They did not stop even when he looked up and twinkled at Almanzo.

"Be you having a good time, son?" he asked.

"Father, can I do that?" said Almanzo.

Father slid back on the bench to make room in front of him. Almanzo straddled it, and crammed the rest of the doughnut into his mouth. He took the handles of the long knife in his hands and shaved carefully up the shingle. It wasn't as easy as it looked. So Father put his big hands over Almanzo's, and together they shaved the shingle smooth. p. 60

Then Almanzo turned it over, and they shaved the other side. That was all he wanted to do. He got off the bench and went in to see Mother. (10)

Her hands were flying and her right foot was tapping on the treadle or the loom. Back and forth the shuttle flew from her right hand to her left and back again, between the even threads of warp, and swiftly the threads of warp criss-crossed each other, catching fast the thread that the shuttle left behind it. p. 61

Thud! said the treadle. Clackety-clack! said the shuttle. Thump! said the hand-bar, and back flew the shuttle.

Mother's workroom was large and bright, and warm from the heating-stove's chimney. Mother's little rocking-chair was by one window, and beside it a basket of carpet-rags, torn for sewing. In a corner stood the idle spinning-wheel. All along one wall were shelves full of hanks of red and brown and blue and yellow yarn, which Mother had dyed last summer.

But the cloth on the loom was sheep's-gray. Mother was weaving undyed wool from a white sheep and wool from a black sheep, twisted together.

"What's that for?" said Almanzo.

"Don't point, Almanzo," Mother said. "That's not good manners." She spoke loudly, above the noise of the loom. p. 62

"Who is it for?" asked Almanzo, not pointing this time.

"Royal. It's his Academy suit," said Mother.

Royal was going to the Academy in Malone next winter, and Mother was weaving the cloth for his new suit.

So everything was snug and comfortable in the house, and Almanzo went downstairs and took two more doughnuts from the doughnut jar, and then he played outdoors again with his sled.

Too soon the shadows slanted down the eastward slopes, and he had to put his sled away and help water the stock, for it was chore-time. (11)

The well was quite a long way from the barns. A little house stood over the pump, and the water ran down a trough through the wall and into the big watering-trough outside. The troughs were coated with ice, and the pump handle was so cold that it burned like fire if you touched it with a bare finger. p. 63

Boys sometimes dared other boys to lick a pump handle in cold weather. Almanzo knew better than to take the dare. Your tongue would freeze to the iron, and you must either starve to death or pull away and leave part of your tongue there.

Almanzo stood in the icy pumphouse and he pumped with all his might, while Father led the horses to the trough outside. First Father led out the teams, with the young colts following their mothers. Then he led out the older colts, one at a time. They were not yet well broken, and they pranced and jumped and jerked at the halter-rope, because of the cold. But Father hung on and did not let them get away.

All the time Almanzo was pumping as fast as he could. The water gushed from the pump with a chilly sound, and the horses thrust their shivering noses into it and drank it up quickly.

Then Father took the pump handle. He pumped the big trough full, and he went to the barns and turned out all the cattle. p. 64

Cattle did not have to be led to water. They came eagerly to the trough and drank while Almanzo pumped, then they hurried back to the warm barns, and each went to its own place. Each cow turned into her own stall and put her head between her own stanchions. They never made a mistake.

Whether this was because they had more sense than horses, or because they had so little sense that they did everything by habit, Father did not know.

Now Almanzo took the pitchfork and began to clean the stalls, while Father measured oats and peas into the feedboxes. Royal came from school, and they all finished the chorses together as usual. Almanzo's birthday was over.

He thought he must go to school next day. But that night Father said it was time to cut ice. Almanzo could stay at home to help, and so could Royal. (12)

APPENDIX C

CHAPTER 28*

MR. THOMPSON'S POCKETBOOK

Father had so much hay that year that the stock could not eat it all, so he decided to sell some of it in town. He went to the woods and brought back a straight, smooth ash log. He hewed the bark from it, and then with a wooden maul he beat the log, turning it and pounding it until he softened the layer of wood that had grown last summer, and loosened the thin layer of wood underneath it, which had grown the summer before. p. 344

Then with his knife he cut long gashes from end to end of the log, about an inch and a half apart. And he peeled off that thin, tough layer of wood in strips about an inch and a half wide. Those were ash withes. p. 345

When Almanzo saw them piled on the Big-Barn Floor, he guessed that Father was going to bale hay, and he asked:

"Be you going to need help?"

Father's eyes twinkled. "Yes, son," he said. "You can stay home from school. You won't learn hay-baling any younger." (1)

Early next morning Mr. Weed, the hay-baler, came with his press and Almanzo helped to set it up on the Big-Barn Floor. It was a stout wooden box, as long and wide as a bale of hay, but ten feet high. Its cover could be fastened on tightly, and its bottom was loose. Two iron levers were hinged to the loose bottom, and the levers ran on little wheels on iron tracks going out from each end of the box.

The tracks were like small railroad tracks, and the press was called a railroad press. It was a new, fine machine for baling hay. p. 346

In the barnyard Father and Mr. Webb set up a capstan, with a long sweep on it. A rope from the capstan went through a ring under the hay-press, and was tied to another rope that went to the wheels at the end of the levers.

When everything was ready, Almanzo hitched Bess to the sweep. Father pitched hay into the box, and Mr. Weed stood in the box and trampled it down, till the box would hold no more. Then he fastened the cover on the box, and Father called,

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*Laura Ingalls Wilder, Farmer Boy (New York: Harper, 1933), pp. 344-361.

"All right, Almanzo!"

Almanzo slapped Bess with the lines and shouted,

"Giddap, Bess!"

Bess began to walk around the capstan, and the capstan began to wind up the rope. The rope pulled the ends of the levers toward the press, and the inner ends of the levers pushed its loose bottom upward. The bottom slowly rose, squeezing the hay. The rope creaked and the box groaned, till the hay was pressed so tight it couldn't be pressed tighter. p. 347
The Father shouted, "Whoa!" And Almanzo shouted, "Whoa, Bess!"

Father climbed up the hay-press and ran ash withes through narrow cracks in the box. He pulled them tight around the bale of hay, and knotted them firmly.

Mr. Weed unfastened the cover, and up popped the bale of hay, bulging between the tight ash-withes. It weighed 250 pounds, but Father lifted it easily.

Then Father and Mr. Weed re-set the press, Almanzo unwound the rope from the capstan, and they began again to make another bale of hay. All day they worked, and that night Father said they had baled enough. (2)

Almanzo sat at the supper table, wishing he did not have to go back to school. He thought about figuring, and he was thinking so hard that words came out of his mouth before he knew it.

"Thirty bales to a load, at two dollars a bale," he said. "That's sixty dollars a lo--"

He stopped, scared. He knew better than to speak p. 348
at table, when he wasn't spoken to.

"Mercy on us, listen to the boy!" Mother said.

"Well, well, son!" said Father. "I see you've been studying to some purpose." He drank the tea out of his saucer, set it down, and looked again at Almanzo. "Learning is best put into practice. What say you ride to town with me tomorrow, and sell that load of hay?"

"Oh yes! Please, Father!" Almanzo almost shouted.

He did not have to go to school next morning. He climbed high up on top of the load of hay, and lay there on his stomach and kicked up his heels. Father's hat was down below him, and beyond were the plump backs of the horses. He was as high up as if he were in a tree.

The load swayed a little, and the wagon creaked, and the horses' feet made dull sounds on the hard snow. The air was clear and cold, the sky was very blue, and all the snowy fields were sparkling. (3)

Just beyond the bridge over Trout River, Almanzo saw a small black thing lying beside the road. When the wagon p. 349 passed, he leaned over the edge of the hay and saw that it was a pocketbook. He yelled, and Father stopped the horses to let him climb down and pick it up. It was a fat, black wallet.

Almanzo shinnied up the bales of hay and the horses went on. He looked at the pocketbook. He opened it, and it was full of banknotes. There was nothing to show who owned them.

He handed it down to Father, and Father gave him the reins. The team seemed far below, with the lines slanting down to the hames, and Almanzo felt very small. But he liked to drive. He held the lines carefully and the horses went steadily along. Father was looking at the pocketbook and the money.

"There's fifteen hundred dollars here," Father said. "Now who does it belong to? He's a man who's afraid of banks, or he wouldn't carry so much money around. You can see by the creases in the bills, he's carried them some time. They're big bills, and folded together, so likely he got them all at once. Now who's suspicious, and stingy, and sold something p. 350 valuable lately?"

Almanzo didn't know, but Father didn't expect him to answer. The horses went around a curve in the road as well as if Father had been driving them.

"Thompson!" Father exclaimed. "He sold some land last fall. He's afraid of banks, and he's suspicious, and so stingy he'd skin a flea for its hide and tallow. Thompson's the man!"

He put the pocketbook in his pocket and took the lines from Almanzo. "Wel'll see if we can find him in town," he said. (4)

Father drove first to the Livery, Sale and Feed Stable. The liveryman came out, and sure enough Father let Almanzo sell the hay. He stood back and did not say anything, while Almanzo showed the liveryman that the hay was good timothy and clover, clean and bright, and every bale solid and full weight.

"How much do you want for it?" the liveryman asked.

"Two dollars and a quarter a bale," Almanzo said.

"I won't pay that price," said the liveryman. "It isn't worth it." p. 351

"What would you call a fair price?" Almanzo asked him.

"Not a penny over two dollars," the liveryman said.

"All right, I'll take two dollars," said Almanzo, quickly.

The liveryman looked at Father, and then he pushed back his hat and asked Almanzo why he priced the hay at two dollars and a quarter in the first place.

"Are you taking it at two dollars?" Almanzo asked. The liveryman said he was. "Well," Almanzo said, "I asked two and a quarter because if I'd asked two, you wouldn't have paid but one seventy-five."

The liveryman laughed, and said to Father, "That's a smart boy of yours."

"Time will show," Father said. "Many a good beginning makes a bad ending. It remains to be seen how he turns out in the long run."

Father did not take the money for the hay; he let Almanzo take it and count it to make sure it was sixty dollars. p. 352 (5)

Then they went to Mr. Case's store. This store was always crowded, but Father always did his trading there, because Mr. Case sold his goods cheaper than other merchants. Mr. Case said, "I'd rather have a nimble sixpence than a slow shilling."

Almanzo stood in the crowd with Father, waiting while Mr. Case served first-comers. Mr. Case was polite and friendly to everybody alike; he had to be, because they were all customers. Father was polite to everybody, too, but he was not as friendly to some as he was to others.

After a while Father gave Almanzo the pocketbook and told him to look for Mr. Thompson. Father must stay in the store to wait his turn; he could not lose time if they were to get home by chore-time.

No other boys were on the street; they were all in school. Almanzo liked to be walking down the street, carrying all that money, and he thought how glad Mr. Thompson would be to see it again. p. 353

He looked in the stores, and the barber shop, and the bank. Then he saw Mr. Thompson's team standing on a side street, in front of Mr. Paddock's wagon-shop. He opened the door of the long, low building, and went in.

Mr. Paddock and Mr. Thompson were standing by the round-bellied stove, looking at a piece of hickory and talking about it. Almanzo waited, because he could not interrupt them.

It was warm in the building, and there was a good smell of shavings and leather and paint. Beyond the stove two workmen were making a wagon, and another was painting thin red lines on the red spokes of a new buggy. The buggy glistened proudly in black paint. Long curls of shavings lay in heaps, and the whole place was as pleasant as a barn on a rainy day. The workmen whistled while they measured and marked and sawed and planed the clean-smelling wood.

Mr. Thompson was arguing about the price of a new wagon. Almanzo decided that Mr. Paddock did not like Mr. Thompson, but he was trying to sell the wagon. He figured the cost with his big carpenter's pencil, and soothingly tried to persuade Mr. Thompson. p. 354

"You see, I can't cut the price any further and pay my men," he said. "I'm doing the best I can for you. I guarantee we'll make a wagon to please you, or you don't have to take it."

"Well, maybe I'll come back to you, if I can't do better elsewhere," Mr. Thompson said, suspiciously.

"Glad to serve you any time," said Mr. Paddock. Then he saw Almanzo, and asked him how the pig was getting along. Almanzo liked big, jolly Mr. Paddock; he always asked about Lucy.

"She'll weigh around a hundred and fifty now," Almanzo told him, then he turned to Mr. Thompson and asked, "Did you lose a pocketbook?" (6)

Mr. Thompson jumped. He clapped a hand to his pocket, and fairly shouted. p. 355

"Yes, I have! Fifteen hundred dollars in it, too. What about it? What do you know about it?"

"Is this it?" Almanzo asked.

"Yes, yes, yes, that's it!" Mr. Thompson said, snatching the pocketbook. He opened it and hurridly counted the money. He counted all the bills over twice, and he looked exactly like a man skinning a flea for its hide and tallow.

Then he breathed a long sigh of relief, and said, "Well, this durn boy didn't steal any of it." (7)

Almanzo's face was hot as fire. He wanted to hit Mr. Thompson.

Mr. Thompson thrust his skinny hand into his pants pocket and hunted around. He took out something.

"Here," he said, putting it into Almanzo's hand. It was a nickel.

Almanzo was so angry he couldn't see. He hated Mr. Thompson; he wanted to hurt him. Mr. Thompson called him a durn boy, and as good as called him a thief. Almanzo didn't want his old nickel. Suddenly he thought what to say. p. 356

"Here," he said, handing the nickel back. "Keep your nickel. I can't change it." (8)

Mr. Thompson's tight, mean face turned red. One of the workmen laughed a short, jeering laugh. But Mr. Paddock stepped up to Mr. Thompson, angry.

"Don't you call this boy a thief, Thompson!" he said. "And he's not a beggar, either! That's how you treat him, is it? When he brings you back your fifteen hundred dollars! Call him a thief and hand him a nickel, will you?"

Mr. Thompson stepped back, but Mr. Paddock stepped right after him. Mr. Paddock shook his fist under Mr. Thompson's nose.

"You measly skinflint!" Mr. Paddock said. "Not if I know it, you won't! Not in my place! A good, honest, decent little chap, and you—For a cent I'll—No! You hand him a hundred of that money, and do it quick! No, two hundred! Two hundred dollars, I say, or take the consequences!" (9)

Mr. Thompson tried to say something, and so did Almanzo. But Mr. Paddock's fists clenched and the muscles of his arms bulged. "Two hundred!" he shouted. "Hand it over, quick! Or I'll see you do!" p. 357 p. 358

Mr. Thompson shrank down small, watching Mr. Paddock, and he licked his thumb and hurriedly counted off some bills. He held them out to Almanzo. Almanzo said, "Mr. Paddock—"

"Now get out of here, if you know what's healthy! Get out!" Mr. Paddock said, and before Almanzo could blink he was standing there with the bills in his hand, and Mr. Thompson slammed the door behind himself.

Almanzo was so excited he stammered. He said he didn't think Father would like it. Almanzo felt queer about taking all that money, and yet he did want to keep it. • Mr. Paddock (10)
said he would talk to Father; he rolled down his shirt sleeves and put on his coat and asked:

"Where is he?"

Almanzo almost ran, to keep up with Mr. Paddock's long strides. The bills were clutched tight in his hand. Father was putting packages into the wagon, and Mr. Paddock p. 359
told him what had happened.

"For a cent I'd have smashed his snearing face," Mr. Paddock said. "But it struck me that giving up cash is what hurts him most. And I figure the boy's entitled to it."

"I don't know as anyone's entitled to anything for common honesty," Father objected. "Though I must say I appreciate the spirit you showed, Paddock."

"I don't say he deserved more than decent gratitude for giving Thompson his own money," Mr. Paddock said. "But it's too much to ask him to stand and take insults, on top of that. I say Almanzo's entitled to that two hundred."

"Well, there's something in what you say," said Father. Finally he decided, "All right, son, you can keep that money." • (11)

Almanzo smoothed out the bills and looked at them; two hundred dollars. That was as much as the horse-buyer paid for one of Father's four-year-olds.

"And I'm much obliged to you, Paddock, standing up p. 360
for the boy the way you did," Father said.

"Well, I can afford to lose a customer now and then, in a good cause," said Mr. Paddock. He asked Almanzo, "What are you going to do with all that money?" • (12)

Almanzo looked at Father. "Could I put it in the bank?" he asked.

"That's the place to put money," said Father. "Well, well, well, two hundred dollars! I was twice your age before I had so much."

"So was I. Yes, and older than that," Mr. Paddock said.

Father and Almanzo went to the bank. Almanzo could just look over the ledge at the cashier sitting on his high stool with a pen behind his ear. The cashier craned to look down at Almanzo and asked Father: "Hadn't I better put this down to your account, sir?"

"No," said Father. "It's the boy's money; let him handle it himself. He won't learn any younger."

"Yes sir," the cashier said. Almanzo had to write his name twice. Then the cashier carefully counted the bills, and wrote Almanzo's name in a little book. He wrote the figures $200, in the book, and he gave the book to Almanzo. p. 361

Almanzo went out of the bank with Father and asked him:

"How do I get the money out again?"

"You ask for it, and they'll give it to you. But remember this, son; as long as that money's in the bank, it's working for you. Every dollar in the bank is making you four cents a year. That's a sight easier than you can earn money any other way. Any time you want to spend a nickel, you stop and think how much work it takes to earn a dollar."

"Yes, Father," Almanzo said. He was thinking that he had more than enough money to buy a little colt. He could break a little colt of his own; he could teach it everything. Father would never let him break one of his colts.

But this was not the end of that exciting day. (13)

CHAPTER 29*

FARMER BOY

Mr. Paddock met Almanzo and Father outside the bank. He told Father that he had something in mind. p. 362

"I've been meaning to speak about it for some little time," he said. "About this boy of yours."

Almanzo was surprised.

"You ever think of making a wheelwright out of him?" Mr. Paddock asked.

"Well, no," Father answered slowly, "I can't say as I ever did."

"Well, think it over now," said Mr. Paddock. "It's a growing business, Wilder. The country's growing, population p. 363 getting bigger all the time, and folks have got to have wagons and buggies. They've got to travel back and forth. The railroads won't hurt us. We're getting more customers all the time. It's a good opening for a smart young fellow."

"Yes," Father said.

"I've got no sons of my own, and you've got two," said Mr. Paddock. "You'll have to think about starting Almanzo out in life, before long. Apprentice him to me, and I'll treat the boy right. If he turns out the way I expect, no reason he shouldn't have the business, in time. He'd be a rich man, with maybe half a hundred workmen under him. It's worth thinking about."

"Yes," Father said. "Yes, it's worth thinking about. I appreciate what you've said, Paddock."

Father did not talk on the way home. Almanzo sat beside him on the wagon seat and did not say anything, either. So much had happened that he thought about it all together, all mixed up. (14)

He thought of the cashier's inky fingers, and of p. 364 Mr. Thompson's thin mouth screwed down at the corners, and of Mr. Paddock's fists, and the busy, warm, cheerful wagon-shop. He thought, if he was Mr. Paddock's apprentice, he wouldn't have to go to school.

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*Laura Ingalls Wilder, Farmer Boy (New York: Harper, 1933), pp. 362-372.

He had often envied Mr. Paddock's workmen. Their work was fascinating. The thin, long shavings curled away from the keen edges of the planes. They stroked the smooth wood with their fingers. Almanzo liked to do that, too. He would like to spread on paint with the wide paint-brush, and he would like to make fine, straight lines with the tiny pointed brush.

When a buggy was done, all shining in its new paint, or when a wagon was finished, every piece good sound hickory or oak, with the wheels painted red and the box painted green, and a little picture painted on the tailboard, the workmen were proud. They made wagons as sturdy as Father's bobsleds, and far more beautiful.

Then Almanzo felt the small, stiff bankbook in his pocket, and he thought about a colt. He wanted a colt with slender legs and large, gentle, wondering eyes, like Starlight's. He wanted to teach the little colt everything, as he had taught Star and Bright. p. 365

So Father and Almanzo rode all the way home, not saying anything. The air was still and cold and all the trees were like black lines drawn on the snow and the sky.

It was chore-time when they got home. Almanzo helped do the chores, but he wasted some time looking at Starlight. He stroked the soft velvety nose, and he ran his hand along the firm curve of Starlight's little neck, under the mane. Starlight nibbled with soft lips along his sleeve.

"Son, where be you?" Father called, and Almanzo ran guiltily to his milking.

At supper-time he sat steadily eating, while Mother talked about what had happened. She said that never in her life—! She said you could have knocked her over with a feather, and she didn't know why it was so hard to get it all out of Father. Father answered her questions, but like Almanzo, he was busy eating. At last Mother asked him:

"James, what's on your mind?"

Then Father told her that Mr. Paddock wanted to take Almanzo as an apprentice. (15)

Mother's brown eyes snapped, and her cheeks turned as red as her red wool dress. She laid down her knife and fork.

"I never heard of such a thing!" she said. "Well, the sooner Mr. Paddock gets that out of his head, the better! I hope you gave him a piece of your mind! Why on earth, I'd like to know, should Almanzo live in town at the beck and call of every Tom, Dick, and Harry!"

"Paddock makes good money," said Father. "I guess if the truth were told, he banks more money every year than I do. He looks on it as a good opening for the boy."

"Well," Mother snapped. She was all ruffled, like an angry hen. "A pretty pass the world's coming to, if any man thinks it's a step up in the world to leave a good farm and go to town! How does Mr. Paddock make his money, if it isn't p. 367
catering to us? I guess if he didn't make wagons to suit farmers, he wouldn't last long!"

"That's true enough," said Father. "But—"

"There's no 'but' about it!" Mother said. "Oh, it's bad enough to see Royal come down to being nothing but a storekeeper! Maybe he'll make money, but he'll never be the man you are. Truckling to other people for his living, all his days—He'll never be able to call his soul his own."

For a minute Almanzo wondered if Mother was going to cry.

"There, there," Father said, sadly. "Don't take it too much to heart. Maybe it's all for the best, somehow."

"I won't have Almanzo going the same way!" Mother cried. "I won't have it, you hear me?"

"I feel the same way you do," said Father. "But the boy'll have to decide. We can keep him here on the farm by law till he's twenty-one, but it won't do any good if he's wanting to go. No. If Almanzo feels the way Royal does, p. 368
we better apprentice him to Paddock while he's young enough."

Almanzo went on eating. He was listening, but he was tasting the good taste of roast pork and apple sauce in every corner of his mouth. He took a long, cold drink of milk, and then he sighed and tucked his napkin farther in, and he reached for his pumpkin pie.

He cut off the quivering point of golden-brown p. 369
pumpkin, dark with spices and sugar. It melted on his tongue, and all his mouth and nose were spicy.

"He's too young to know his own mind," Mother objected.

Almanzo took another big mouthful of pie. He could not speak till he was spoken to, but he thought to himself that he was old enough to know he'd rather be like Father than like anybody else. He did not want to be like Mr. Paddock, even. Mr. Paddock had to please a mean man like Mr. Thompson, or lose the sale of a wagon. Father was free and independent; if he went out of his way to please anybody, it was because he wanted to.

Suddenly he realized that Father had spoken to him. He swallowed, and almost choked on pie. "Yes, Father," he said.

Father was looking solemn. "Son," he said, "you heard what Paddock said about you being apprenticed to him."

"Yes, Father."

"What do you say about it?" (17)

Almanzo didn't exactly know what to say. He hadn't supposed he could say anything. He would have to do whatever Father said. p. 370

"Well, son, you think about it," said Father. "I want you should make up your own mind. With Paddock, you'd have an easy life, in some ways. You wouldn't be out in all kinds of weather. Cold winter nights, you could lie snug in bed and not worry about young stock freezing. Rain or shine, wind or snow, you'd be under shelter. You'd be shut up, inside walls. Likely you'd always have plenty to eat and wear and money in the bank."

"James!" Mother said.

"That's the truth, and we must be fair about it," Father answered. "But there's the other side, too, Almanzo. You'd have to depend on other folks, son, in town. Everything you got, you'd get from other folks.

"A farmer depends on himself, and the land and the weather. If you're a farmer, you raise what you eat, you raise what you wear, and you keep warm with wood out of your own timber. You work hard, but you work as you please, and no man can tell you to go or come. You'll be free and independent, son, on a farm." p. 371

Almanzo squirmed. Father was looking at him too hard, and so was Mother. Almanzo did not want to live inside walls and please people he didn't like, and never have horses and cows and fields. He wanted to be just like Father. But he didn't want to say so.

"You take your time, son. Think it over," Father said. "You make up your mind what you want."

"Father!" Almanzo exclaimed.

"Yes, son?"

"Can I? Can I really tell you what I want?"

"Yes, son," Father encouraged him. (18)

"I want a colt," Almanzo said. "Could I buy a colt all my own with some of that two hundred dollars, and would you let me break him?"

Father's beard slowly widened with a smile. He put down his napkin and leaned back in his chair and looked at Mother. Then he turned to Almanzo and said:

"Son, you leave that money in the bank." p. 372

Almanzo felt everything sinking down inside him. And then, suddenly, the whole world was a great, shining, expanding glow of warm light. For Father went on:

"If it's a colt you want, I'll give you Starlight."

"Father!" Almanzo gasped. "For my very own?"

"Yes, son. You can break him, and drive him, and when he's a four-year-old you can sell him or keep him, just as you want to. We'll take him out on a rope, first thing tomorrow morning, and you can begin to gentle him." (19)

APPENDIX D

STORY EVENTS

1. Almanzo stays home from school to bale hay. ____
2. Next day, Almanzo goes with Father to sell bales. ____
3. Almanzo finds pocketbook on way to town. ____
4. Father deduces that the pocketbook belongs to Mr. Thompson. ____
5. Almanzo sells bales at the livery stable. ____
6. Father and Almanzo wait for service at Mr. Case's store. ____
7. Almanzo finds Mr. Thompson discussing the price of a wagon with Mr. Paddock. ____
8. Almanzo returns the pocketbook. ____
9. Mr. Thompson treats him like a thief—gives him a nickel. ____
10. Almanzo returns the nickel. ____
11. Mr. Paddock makes Mr. Thompson give Almanzo $200. ____
12. Mr. Paddock explains to Father. ____
13. Father lets Almanzo keep the money. ____
14. Almanzo takes the money to the bank. ____
15. Mr. Paddock asks Father if Almanzo can be his apprentice wheelright. ____
16. They have a quiet ride home. ____
17. They do the chores. ____
18. When supper is over, Father explains to Mother that Mr. Paddock wants to apprentice Almanzo. ____
19. Mother is very upset—believes that true freedom and independence are found on the farm. ____
20. Father explains both sides of the issue and asks Almanzo what he thinks. ____
21. Almanzo wants to buy a colt. ____
22. Father says the money will stay in the bank. ____
23. Father gives Almanzo Starlight. ____

APPENDIX E

A SAMPLE UNAIDED RECALL

Well, Almanzo's he's—going to go to town you know to help his father sell hay—He's learned how to bale it so he's going to help his father—to town to help his father sell hay. So, he starts, they start off. He's riding in the back of the hay wagon and he sees a wallet. He tells his father to stop and he jumps off and goes on down and he picks it up, gets back in the wagon and he wants to see it so he shows it and he gives Almanzo the reins to drive the horses and he feels that the horses are so big and that it's so far down to them. And so they get to town right and they've been wondering whose it was you know and they finally figure out it's Mr. Thompson's! And so where is Mr. Thompson? They just walk in the store. Right? They—so Father says "You go and look for Mr. Thompson" in the barbershop and everywhere and then he sees Mr. Thompson's team outside the wagon shop. So he walks in and there's Mr. Thompson and he doesn't interrupt them and he says to Mr. Thompson "Did you lose a wallet?" He says "Yes. Did you find it?" He says "Yes." "This durn boy didn't steal any of it" and he gives him a nickel you see so and then then he gives it—Almanzo gives it back to Thompson 'cause he doesn't want his—his darn nickel cause calling him a durn boy is worse than calling him a thief! So then, the man Mr. Paddock who owns the wagon shop butts in and says "And you just gave him a nickel? You know when he finds all your money I think you should give him $200 you know or be prepared to suffer the consequences" so he decides not to suffer the consequences and gives him $200. And then he goes and opens a bank account with Father. Then Mr. Paddock wants him as his apprentice so then he just—they go home—they do their chores and he really wants a colt—And he does his chores right and he strokes the colt right and his Father says "Where are you Almanzo? You can't forget to do your side of the work" so he does it and the Mother and Father are talking about it and the Mother's really shocked, you know and so he says well "You might as well be able to do it" but see then they keep on arguing and finally Mr.—Father—asks him which one—what he wants—to be a farmer or a wagon salesman and he tells him about all the things a wagon salesman does and all the things a—all the things a farmer does so he's really shy and says he wants a colt—see so he gives him Starlight, one of their colts so he can break it himself 'cause he's never broken a colt before. So he decides you know "Well, sure I'll give you a colt" so he gets a colt and he breaks it in the morning—he's going to take it out first thing in the morning and that's the end.

T: O.K. Can you think of anything else that happened.

C: Mm. No.

T: O.K. What happened after Almanzo said that he wanted to buy a colt?

C: Um. His father said that he could have Starlight and um.

T: Let me see. Where was Almanzo before he found Mr. Thompson discussing . . . uh Mr. Thompson and returned the pocketbook?

C: Well, he was in the store and then he went out into the street and looked all around for him and then he spied his thing, his team.

T: When they figured out that the pocketbook belonged to Mr. Thompson, where did Almanzo and his Father go first?

C: Oh, the livery stable to sell the hay.

Note: T - teacher/researcher

C - child

APPENDIX F

PENCIL MAGIC*

I like a yellow pencil,
A shiny yellow pencil
With a rub-away eraser
And a point all sharply black.
I can draw all kinds of pictures
Of animals, things and people—
With a shiny yellow pencil
There isn't a thing I lack!

If I want a brand new spaceship
Or a secret house in a treetop
Or a friendly bear to play with
Or eleven ducks on a pond,
I've only to use my pencil
And there they are on the paper—
Oh, a shiny yellow pencil
Is a magical fairy wand!

Jane Merchant

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*From Ginn Reading 360 Teachers' Edition, With Skies and Wings, p. 104.

APPENDIX G

GRANDPA'S FARM*

STORY SUMMARY

Grandpa tells his grandson how the Big Wind of '34 brought the barn that is now a part of his farm. The barn, unfortunately, settled on the cow's tail and broke it off, but Grandma produced a salve which, when rubbed on the stump of the cow's tail, made a new tail grow overnight. The same salve, rubbed on the cut-off tail, grew a second cow and when rubbed on a cornstalk, sent the plant shooting skyward, and Wilfred the pig with it.

All summer Wilfred stayed on the cornstalk eating corn and dropping the cobs on Grandpa's and Grandma's heads forcing them to wear dishpans on their heads whenever they went outdoors. When the cornstalk stopped growing, Wilfred climbed down. He had eaten so much corn that he weighed over a thousand pounds. It was a good thing because it was very cold up there. However even with all his extra weight, poor Wilfred finally froze stiff in the terrible winter of '36—but that is another story which Grandpa promises to tell some other time.

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*From Ginn Reading 360 Teachers' Edition, With Skies and Wings, p. 131.